

CHAPTER 5 PNEUMATIC PUMPS

This chapter addresses the EPA's responses to public comments on pneumatic pumps in the EPA's Proposed *Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources*.

Commenters also raised issues on topics that are not covered by this chapter. Please refer to the following chapters for responses specific to those issues:

- ☐ **Chapter 1:** Source Category
- ☐ **Chapter 2:** Regulation of Methane
- ☐ **Chapter 3:** Well Completions
- ☐ **Chapter 4:** Fugitives Monitoring
- ☐ **Chapter 6:** Controllers
- ☐ **Chapter 7:** Compressors
- ☐ **Chapter 8:** Equipment Leaks at Natural Gas Processing Plants
- ☐ **Chapter 9:** Liquids Unloading
- ☐ **Chapter 10:** Storage Vessels
- ☐ **Chapter 11:** Compliance
- ☐ **Chapter 12:** Regulatory Impact Analysis
- ☐ **Chapter 13:** Existing State, Local, and Federal Rules
- ☐ **Chapter 14:** Subpart OOOO
- ☐ **Chapter 15:** Miscellaneous
- ☐ **Chapter 16:** Comment Period Extension

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5.1 Support for Proposed Requirements

Commenter Name: Michael J. Meyers, et al., Assistant Attorneys General

Commenter Affiliation: Attorneys Generals of New York, Massachusetts, Oregon, Rhode Island, and Vermont (States)

Document Control Number: EPA-HQ-OAR-2010-0505-6940

Comment Excerpt Number: 6

Comment: The Proposed Standards for Compressors and Pneumatic Devices are Technically Achievable and Cost Effective. The Proposed Rule demonstrates that methane can be significantly and cost-effectively reduced by establishing emission standards for methane from compressors and pneumatic devices. Centrifugal compressor emissions may be cost-effectively controlled by installation of a capture and combustion device on wet seal compressors, while reciprocating compressor emissions may be controlled by the periodic replacement of rod packing systems. 80 Fed. Reg. at 56,619-21. Pneumatic controller emissions can be significantly reduced by replacing high-bleed controllers with either low-bleed or zero-bleed controllers. Methane emissions from pneumatic pumps can be cut in many instances by replacing the pumps at natural gas processing plants with instrument air pumps, and by routing emissions from pumps in the production, transmission, and storage segments to an existing control device or a process. Id. at 56,623-27. These findings are consistent with previous EPA determinations concerning this equipment and in other studies. See, e.g., Compressors White Paper at 43; Pneumatic Devices White Paper at 56-57; U.S. Env'tl. Prot. Agency, Reducing Methane Emissions from Compressor Rod Packing Systems 1 (2006) (indicating payback periods from one to three months for compressor maintenance activities that reduce methane emissions); WRI Clearing the Air Report at 6 (replacing existing high-bleed pneumatic devices with low-bleed equivalents throughout natural gas system identified as one of three strategies that could cost-effectively cut methane emissions by thirty percent); Natural Res. Def. Council, Leaking Profits: The Oil and Gas Industry Can Reduce Pollution, Conserve Resources, and Make Money by Preventing Methane Waste 1 (2012) [hereinafter NRDC Leaking Profits Report] (identifying improved maintenance of reciprocating compressors and replacement of high-bleed pneumatic controllers with low-

bleed or zero-bleed controllers as two of ten cost-effective strategies that could reduce methane emissions from the oil and gas sector by eighty percent).

Response: Comment is a supportive comment to which no response is required. We are finalizing these requirements with revisions as provided in section VI.D of the preamble to the final rule.

Commenter Name: Darin Schroeder, David McCabe, Lesley Fleishman and Conrad Schneider

Commenter Affiliation: Clean Air Task Force et al.

Document Control Number: EPA-HQ-OAR-2010-0505-7062

Comment Excerpt Number: 70

Comment: We support the proposed measures, which would require that a) new and modified pneumatic pumps at gas processing plants emit zero natural gas, and b) new and modified pneumatic pumps at other sites reduce natural gas emissions, provided a control device is available on site. Pneumatic pumps are estimated to currently emit over 113,000 metric tons of methane per year, and EPA estimates that the proposed measures will reduce emissions by over 32,000 short tons of methane and 9,000 short tons of VOC in 2025. The measures that EPA is proposing will be very inexpensive. EPA estimates that the annual cost of routing emissions from a pump to a control device or VRU is \$285. Based on these costs, EPA estimates that these standards will reduce nationwide emissions for \$157 per short ton of methane abatement, or \$566 per short ton of VOC abatement. For some types of pumps, routing emissions to a VRU will result in net cost savings.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6940, Excerpt 6.

Commenter Name: T. Davis

Commenter Affiliation: Citizen

Document Control Number: EPA-HQ-OAR-2010-0505-6243

Comment Excerpt Number: 3

Comment: A number of corrective technologies exist to help bring oil & gas operations into compliance with EPA's proposed rule, many of which are both available and affordable for producers. Examples include:

Airworks Twister E60 Air Skid – this solar- or wind-powered compressed-air generator eliminates the need to use field gas as a motive force for pneumatic equipment operation at off-grid (“unconventional”) well sites. This technology has demonstrated a notable reduction in fugitive emissions; operating an E60 unit on a three-well pad has been shown to reduce vented methane emissions by nearly 11,000 pounds per day (see, e.g., Airworks Compressors Corp., Press Release: Disruptive Technology That Prevents Disruption – Airworks Compressors Corp Provides a Solution for Half Billion Dollar Problem, MARKETWIRED, (Jan. 21, 2015),

available at <http://www.marketwired.com/press-release/disruptivetechtechnology-that-prevents-disruption-airworks-compressorscorp-provides-solution-1984864.htm>).

Electric pumps for glycol dehydrators – replacing gas-assisted pumps with electric ones has proven to:

- ❑ Reduce gas losses
- ❑ Increase operational efficiency
- ❑ Reduce maintenance costs
- ❑ Reduce regulatory compliance costs

EPA estimates have indicated that, for producers who switch from gas-assisted pumps to electric ones, “the cost of implementation can be recovered in less than 1 year” (see EPA, LESSONS LEARNED: REPLACING GAS-ASSISTED GLYCOL PUMPS WITH ELECTRIC PUMPS (2006), available at http://www3.epa.gov/gasstar/documents/ll_glycol_pumps3.pdf).

Response: See response to DCN EPA-HQ-OAR-2010-0505-6940, Excerpt 6.

Commenter Name: Haley Colson Lewis, Programs Manager and Michael Hansen, Interim Executive Director

Commenter Affiliation: GASP

Document Control Number: EPA-HQ-OAR-2010-0505-6436

Comment Excerpt Number: 4

Comment: Specifically, the 95% reduction standards for compressors and pneumatic pumps already available on site are strong and reasonable and should not be altered to cover less than a 95% reduction standard.

Response: See responses to DCN EPA-HQ-OAR-2010-0505-6940, Excerpt 6 and DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 70.

Commenter Name: William C. Allison

Commenter Affiliation: Colorado Department of Public Health and Environment

Document Control Number: EPA-HQ-OAR-2010-0505-6876

Comment Excerpt Number: 14

Comment: EPA has proposed that pneumatic pumps at natural gas processing plants have a natural gas emission rate of zero, and that pneumatic pumps at locations other than at a natural gas processing plant reduce natural gas emissions by 95% where a control device is installed on-site. The Division supports EPA's efforts to reduce emissions from pneumatic pumps. The Division notes that pneumatic pumps may fall into the "super emitter" category of sources. Therefore, the Division suggests that EPA consider requiring owners or operators provide

information through the pneumatic pump reporting provisions that will assist in determining whether the pneumatic pump is a "super emitter," such as the estimated emissions of the pneumatic pump and whether, and how frequently, the pump seal was found to be leaking.

Response: We are finalizing the requirements with revisions as outlined in the preamble to the final rule in section VI.D. The EPA does not agree that the rule should impose emissions reporting requirements for all individual pumps in order for a sub-population of the pumps to be identified. The final rule reporting requirements are appropriately focused on demonstrating compliance with the rule requirements.

5.2 Opposition to Proposed Requirements

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:00 AM - 7:55 PM; Public Hearing #1 - Denver, Colorado

Commenter Affiliation: None

Document Control Number: EPA-HQ-OAR-2010-0505-7337-1

Comment Excerpt Number: 229

Comment: [F]or pneumatic pumps, [the EPA should] also increase from 95 percent to 98 percent control through available technology, and with the Best Available Control Technology available standard in Wyoming.

Response: The EPA has determined BSER for control of pneumatic pumps to be routing emissions to an existing control device or process which establishes a standard for emissions of 95 percent control. However, we are not requiring the owner/operator to install a control device or process that achieves 95 percent control for control of pneumatic pumps emissions. We are basing the 95 percent requirement on the demonstrated control efficiency of a combined closed vent system with a combustion control device or VRU.

During development of NSPS OOOOa, the EPA determined that a 95 percent standard of emission reduction reflects what is achievable with the application of the BSER (routing to an existing control device or process). While the EPA is aware that combustors and utility flares may be capable of achieving instantaneous control efficiencies greater than 95 percent, we believe that affected facilities can continuously meet a 95 percent emission standard. In determining BSER, the EPA must determine that the control efficiency can be achieved by the affected facilities to which it applies.

In setting the 95 percent reduction requirement, the EPA recognizes that there may not be a control device or process available on site. Our analysis shows that it is not cost-effective to require the owner or operator of a pneumatic pump affected facility to install a new control device or process on site to capture emissions. If a control device or ability to route to a process is not available on site, the pneumatic pump affected facility is not subject to the emission reduction provisions of the final rule. In other instances, there may be a control device available on site, but it may not be capable of achieving a 95 percent reduction. In those cases, we are not requiring the owner/operator to install a new control device on site or to retrofit the existing control device, however, we are requiring the owner/operator of a pneumatic pump affected facility at a well site to route the emissions to an existing control device even if it achieves a level of emissions reduction less than 95 percent. In those instances, the owner or operator must maintain records demonstrating the percentage reduction that the control device is designed to achieve. In this way, the final rule will achieve emission reductions with regard to pneumatic pump affected facilities even if the only available control device cannot achieve a 95 percent reduction.

Commenter Name: C. Wyman

Commenter Affiliation: American Gas Association

Document Control Number: EPA-HQ-OAR-2010-0505-6874

Comment Excerpt Number: 24

Comment: EPA Should Revise Its Proposed Standard for Pneumatic Pumps To Address Safety Concerns And Focus On Large Emitters. EPA's proposal would require that if a control device is present on the site, any new or modified pneumatic pump must be routed to the control device. EPA's proposal does not account for safety concerns that could arise when a control device is not designed to handle the additional stream from the pneumatic pump. Nor does EPA's proposal account for the increased pressure on the rest of the closed vent system connected to the control device. AGA encourages EPA to revise its proposal to take these safety considerations into account. In addition, AGA encourages EPA to revise its proposed pneumatic pump standard to focus on the largest emitters and exclude those smaller pumps as the Agency proposes to do for pneumatic controllers. By focusing on the largest pumps, operators can expend resources addressing those pumps that are likely to be the largest sources of emission.

Response: The EPA agrees with the commenter that there may be instances where control device design, configuration, or other technical issues could cause either operational interference or safety concerns. Therefore, we have provided a technical infeasibility exemption in the final rule, provided a certified engineering assessment demonstrates the reasons for the exemption. In reviewing the information in the record and in response to comments that we received regarding the need to focus on the largest emitters and exclude smaller pumps, we are not finalizing requirements for piston pumps in the final rule. See section VI.D.1 of the preamble to the final rule for a discussion of this issue.

Commenter Name: Pamela Lacey, Chief Regulatory Counsel

Commenter Affiliation: American Gas Association (AGA)

Document Control Number: EPA-HQ-OAR-2010-0505-6936

Comment Excerpt Number: 20

Comment: EPA Should Revise Its Proposed Standard for Pneumatic Pumps To Address Safety Concerns And Focus On Large Emitters.

EPA's proposal would require that if a control device is present on the site, any new or modified pneumatic pump must be routed to the control device. EPA's proposal does not account for safety concerns that could arise when a control device is not designed to handle the additional stream from the pneumatic pump. Nor does EPA's proposal account for the increased pressure on the rest of the closed vent system connected to the control device. AGA encourages EPA to revise its proposal to take these safety considerations into account. In addition, AGA encourages EPA to revise its proposed pneumatic pump standard to focus on the largest emitters and exclude those smaller pumps as the Agency proposes to do for pneumatic controllers. By focusing on the largest pumps, operators can expend resources addressing those pumps that are likely to be the largest sources of emission.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6874, Excerpt 24.

Commenter Name: Theresa Pugh

Commenter Affiliation: Interstate Natural Gas Association of America (INGAA)

Document Control Number: EPA-HQ-OAR-2010-0505-6872

Comment Excerpt Number: 32

Comment: INGAA Recommends Removing Pneumatic Pumps as an Affected Source for T&S Facilities.

The Proposed Rule includes T&S pneumatic pumps as an affected source if there is a control device located on site. Control for this situation would require a vapor recovery system and some means to combust, catalytically oxidize, or re-use the stream. EPA requests comment and additional information on gas assist glycol dehydrator pumps and the associated emissions. Although INGAA does not have detailed information readily available, these pumps are not prevalent in T&S and when at a site (e.g., a storage facility with dehydration), vapor recovery or other control devices are usually not located at the site.

INGAA's interpretation is that this requirement would only apply if a pump is present, as well as the associated control (i.e., existing vapor recovery and control system is a prerequisite to applicability). For the T&S sector, cumulative emissions from glycol dehydrator pumps are very low, and compressor stations typically do not have an available control system. For some upstream operations, it is more likely that a control device will be co-located at the site due to other requirements associated with storage tank or other emissions. For transmission compressor stations, dehydrators are very uncommon and the need for a control device is unlikely (i.e., not required by other regulations). Storage facilities may include a dehydrator, but NSPS affected sources may not include a gas assist dehydrator pump. In addition, control devices are relatively uncommon because other regulations, such as the oil and gas NESHAP (Part 63, Subpart HHH) only require control in certain circumstances (e.g., for a large dehydrator and dependent upon the dehydrator throughput and natural gas BTEX content). For these reasons, INGAA recommends removing pneumatic pumps as an affected source for T&S facilities.

Response: The EPA agrees with the commenter's assertions that pneumatic pumps should not be regulated in the transmission and storage segment at this time. We have revised the final rule to include only pumps located at natural gas processing plants and at well sites in the production segment. We are basing this decision on lack of available data and information on pumps located in the gathering and boosting and transmission and storage segments. See section VI.D.2 the preamble to the final rule for further discussion of this issue. In addition, the EPA agrees with the commenter that glycol dehydrator pumps should not be subject to the NSPS requirement, and the EPA has clarified that the definition of a pneumatic pump affected facility does not include

glycol dehydrator pumps.¹ Please see section VIII.E.5 of the preamble to the final rule for more information on glycol dehydrator pumps.

Commenter Name: Thure Cannon, President

Commenter Affiliation: Texas Pipeline Association (TPA)

Document Control Number: EPA-HQ-OAR-2010-0505-6927

Comment Excerpt Number: 26

Comment: EPA is proposing new NSPS rules for pneumatic pump emissions in the oil and gas source category. As discussed below, we believe that the proposed requirements would result in substantial new cost but would result in minimal emission reductions. Accordingly, we believe that the proposed control requirements for pneumatic pump emissions should be withdrawn. At a minimum, EPA should significantly revise the currently proposed rules for pneumatic pump emissions to address the deficiencies noted in paragraphs 2-3 below.

EPA is proposing a requirement of 95 percent control of methane and VOC emissions for pneumatic pumps (other than at natural gas processing plants) if a control device is already on site. TPA is opposed to this requirement.

Response: In this final rule, the EPA is finalizing requirements for diaphragm pumps. Our analysis indicates that it is cost-effective to control emissions from diaphragm pumps at well sites in the production segment by routing to a control device or process available onsite. We therefore are finalizing a 95 percent reduction requirement for diaphragm pumps at well sites. However, as a result of our analysis of the data in the record as well as comments, we have revised the rule to exclude all piston pumps. We are also excluding all pumps in the gathering and boosting and transmission and storage segments due to lack of reliable data at this time. We are finalizing requirements for pneumatic pumps with revisions as provided in sections VI.D.1 and VI.D.2 of the preamble to the final rule.

¹ We note that when we refer to pneumatic pumps throughout this RTC we are not referencing glycol dehydrator pumps, which are not pneumatic pump affected facilities under the final rule.

5.3 Best System of Emission Reduction

Commenter Name: Howard J Feldman

Commenter Affiliation: American Petroleum Institute

Document Control Number: EPA-HQ-OAR-2010-0505-6884

Comment Excerpt Number: 11

Comment: Issue ... EPA has ignored critical technical and safety issues in assuming that pneumatic pumps can be readily connected to existing closed vent systems. There are numerous potential safety and operational issues with connecting the discharge from a pneumatic pump to an existing control device and closed vent system. These issues can impact both the performance of the pump and result in back pressure on the other sources being controlled.

Recommendation ... EPA should also provide an exemption from the requirements to control pump emissions where it has been determined to be technically infeasible or potentially unsafe.

EPA Did Not Consider Or Provide For Instances Where Routing A Pneumatic Pump Affected Source To An Existing Control Device Is Not Technically Feasible...

Whether considering a VRU, flare, enclosed combustion device, or any other control technique, control devices are designed for a specific set of conditions with a number of key assumptions. For example, a flare header might be designed to allow enough flow to permit two pressure safety valves (PSV) to open simultaneously without creating so much back pressure as to take either PSV out of critical flow. The design is sensitive to other flow streams in the pipe and putting a pump exhaust into that header could result in too much backpressure for the safety devices to function as intended. Conversely, but equally important, a pneumatic pump is chosen for a specific backpressure and the backpressure imposed by a PSV could stop the pump from functioning at a critical moment, exacerbating the already unstable situation that resulted in the opening of the PSVs.

Additionally, enclosed combustion devices are designed for a maximum BTU load and may not be able to accommodate the exhaust gas from a pneumatic pump affected source without replacing the control device.

The design process for VRUs are even more sensitive to changes than other control devices. The VRU equipment is designed to recover vapors and raise their pressure enough to be useful, is expensive, and has a limited range of possible flow rates. Adding vapor loads to a VRU must be carefully evaluated on a case-by-case basis.

In some instances an existing control device on a particular site may be owned and operated by a third party, such as a control device owned and operated by a gathering and collection system operator with a glycol dehydration unit on a well site. In these instances, the well site operator does not have the right to route a pneumatic pump affected source exhaust to the control device.

EPA should provide exclusion in the rule such that routing a pneumatic pump affected source to an existing control device or closed vent system is not required if it is not technically feasible or

if the control device is not owned and operated by the site operator. Proposed updated rule language is included in 24.4.1.

If needed, EPA could provide provisions in the rule for an operator to make an engineering determination that an existing control device cannot technically handle the additional gas from a pneumatic pump affected source exhaust, document this determination, and make such a determination available for inspection by EPA or other competent authority

Response: The EPA agrees that there are instances where it may be technically infeasible to connect a pump to an existing control device or process. The final rule provides an exemption in certain circumstances where it is technically infeasible to connect the pump to an existing control device or process. See section VI.D.3 of the preamble to the final rule for more detail regarding this issue.

Commenter Name: James Martin

Commenter Affiliation: Noble Energy

Document Control Number: EPA-HQ-OAR-2010-0505-6852

Comment Excerpt Number: 11

Comment: EPA proposed that if a new pneumatic pump is installed at an existing well site where a control device is present, the operator would be required to tie that pneumatic pump into the control device. While Noble appreciates that doing so may provide some modest reduction in emissions, Noble believes there are numerous operational reasons that doing so would be infeasible or unsafe or both.

Typically, a methanol pump, for example, would be located near the wellhead, while a control device could be located some distance away, typically nearer storage tanks. In such situations, the pump would be required to push gas a substantial distance through tubing, and would have to overcome tubing line (back) pressure that would be present. That raises significant mechanical challenges, since the pump generally will not be designed to overcome any line pressures. If the tubing line between a pump and a control device is buried- and that may be required for safety reasons- that tubing line will have a propensity to collect liquids and make the entire system inoperable.

While EPA's proposal may be much more easily accommodated at a new well sites, Noble has significant reservations that it will be feasible or safe to tie a pump to a control device at many existing locations without entirely replumbing the system. If that becomes necessary, operators necessarily will make a calculation of whether the production at the site warrants the added cost that would be entailed by that replumbing; it has been Noble's experience that such a requirement would lead to the abandonment of a significant number of marginal wells. Noble therefore recommends that EPA reconsider the merits of requiring pumps to be tied into a control device at any well sites, given the feasibility and safety considerations. Alternatively, EPA could make this provision apply only to new well sites, so as to avoid the concerns we raise regarding retrofitting pumps at existing sources.

Response: The final rule provides an exemption in certain circumstances where it is technically infeasible to connect the pump to an existing control device or process. See section VI.D.3 of the preamble to the final rule for more detail regarding this issue.

Commenter Name: Matthew Hite

Commenter Affiliation: Gas Processors Association (GPA)

Document Control Number: EPA-HQ-OAR-2010-0505-6881

Comment Excerpt Number: 28

Comment: EPA Must Provide Additional Flexibility for Facilities with Existing Control Devices

EPA must also provide additional flexibility for facilities with existing control devices that may not have been installed with the expectation that they would need to receive emissions from pneumatic pumps. First, EPA must add an exclusion for existing control devices added under Subpart OOOO or OOOOa that cannot physically handle additional vented emissions from pneumatic pumps. The original installation and engineering design for these control devices may not have included the excess capacity to safely include routing additional vent streams from pneumatic pumps. The rule should only require recordkeeping of a one-time engineering demonstration that the control device cannot handle the stream to qualify for the exclusion for pneumatic pumps at a site. However, if a new control device is installed after a new pneumatic pump is installed or an existing pneumatic pump is modified, the exemption would no longer apply and the new control device would need to be designed with sufficient capacity to accommodate emissions vented from the pneumatic pump.

Second, some existing NSPS OOOO control devices may not be able to meet the 95% reduction efficiency requirement when additional sources are added in. The costs for upgrading existing devices to meet 95% are not included in the proposed rule and EPA has not provided a reasonable basis for retrofitting these control devices to achieve the 95% reduction standard. Therefore, GPA urges EPA to remove the 95% control requirement for pneumatic pumps when emissions are routed to existing NSPS OOOO control devices. The existing control devices monitoring, testing, recordkeeping, and reporting requirements imposed under Subpart OOOO should be sufficient to ensure that emission are reduced in accordance with the design requirements of the existing control device.

Response: The final rule provides an exemption in certain circumstances where it is technically infeasible to connect the pump to an existing control device or process. With regard to commenter's assertions that certain devices may not be able to meet the 95 percent emission reduction requirement, please see response to DCN EPA-HQ-OAR-2010-0505-7337, Excerpt 229 for more information.

Commenter Name: Thure Cannon, President
Commenter Affiliation: Texas Pipeline Association (TPA)
Document Control Number: EPA-HQ-OAR-2010-0505-6927
Comment Excerpt Number: 31

Comment: Similarly, the 95 percent control requirement should not be triggered by the presence of an on-site control device that does not have sufficient capacity to control emissions from the pneumatic pump. If the control device has no capacity to handle a new gas stream and therefore cannot assist in controlling emissions, the fact that the device is present on-site is of no moment. As stated above, the rule's 95 percent control requirement assumes the presence of an on-site device that is actually capable of controlling pump emissions. Where the device does not have available capacity, it is of no assistance in controlling pump emissions and therefore its presence on-site should not trigger the 95 percent control requirement.

Response: See the response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 28.

Commenter Name: Kathleen M. Sgamma, Vice President, Government and Public Affairs
Commenter Affiliation: Western Energy Alliance
Document Control Number: EPA-HQ-OAR-2010-0505-6930
Comment Excerpt Number: 48

Comment: We support the proposed rule language requiring no more than 95 percent control for pneumatic pumps. Higher levels of control are not technically feasible or cost effective. We understand EPA agrees with this position. For example, EPA's detailed cost analysis for 40 C.F.R. § 63, Subpart HHHH correctly recognizes control efficiency above 95 percent may not be technically feasible. See *Technology Review for the Final Amendments to Standards for the Oil and Natural Gas Production and Natural Gas Transmission and Storage Source Categories*, Memorandum to Greg Nizich, Bruce Moore, EPA, at 2 (April 17, 2012) ("Test data indicates that levels of control above 95 percent have not been shown to be reliably achieved in the field. Based on this analysis, we conclude that 98 percent control [is] neither technologically nor economically feasible at this time.")

There are a number of compelling technical, economic, and, environmental reasons not to increase control efficiency requirements for pneumatic pumps:

- Not all pneumatic pumps can be effectively routed to an existing control device. Take, for example, natural-gas fired piston pumps (i.e. pneumatic methanol injection pumps) located at the wellhead. Pneumatic methanol pumps at the wellhead are far from where existing combustors are typically located at a site (e.g. at the production equipment and /or storage vessels). As a result, there will be insufficient pressure from the exhaust of the pneumatic pumps to be routed back to the combustor. Operators will not be able to control emissions by 95 percent from these pumps with existing controls. Accordingly, operators will have to consider converting pneumatic pumps to air-driven, electrically-powered or solar pump alternatives. Many oil and gas fields do not have access to grid

electricity and it is extremely costly to install. If grid electricity is not already available, the use of air-driven or electrically-powered pumps is not an option without costly generators and additional emissions to provide onsite electricity generation. Solar pumps can also be costly. Solar pumps cost around \$3,700 per pump and require approximately \$1,000 in maintenance/service costs every three years. Solar pumps are also inherently unreliable because the sun does not shine all the time. The Alliance requests that pneumatic methanol pumps located at the wellhead be exempt from the requirement to control VOC and methane emissions by 95 percent from an existing combustion control device.

- A capture rate of higher than 95 percent from a pneumatic pump on a vapor recovery unit would require compression of extremely low volumes of low pressure gas, in order to overcome back pressure into the pump from the vapor recovery system. In addition to adding substantial cost, compressing these low volumes of gas will generate other emissions that would almost certainly negate any environmental benefit from their capture.
- During upset events, back pressure from a control system on a pneumatic pump would pose a safety hazard. Pressure buildup on the pump could rupture a diaphragm and create a much larger human and environmental health hazard than the emissions being targeted for capture. Capture requirements on pneumatic pumps may force companies away from them entirely. However, alternatives like instrument air and solar pumps are not a realistic or feasible (technically or economically) alternative in many cases. Instead, companies will be forced to install redundant back-up pump systems, which will add a significant expense that EPA has not accounted for in its cost analysis.
- Pneumatic pumps do not present a major source of emissions, yet the rule would require each unit to be handled like a much larger piece of equipment. The emissions and cost data do not support this approach, and we strongly urge EPA to reconsider requiring controls for such a small source. This is particularly problematic in the case of diaphragm pneumatic pumps, which are only used intermittently. These pumps, along with methanol pumps and heat trace pumps used only during winter months, have very minor emissions. Moreover, given their intermittent status, it appears EPA never intended to regulate diaphragm pneumatic pumps, and the Alliance seeks clarification regarding its regulation of such intermittent equipment.

Response: The EPA is finalizing the 95 percent emission reduction requirement. We based the 95 percent requirement on the demonstrated control efficiency of a combined closed vent system with a combustion control device or VRU. During development of NSPS OOOOa, the EPA determined that a 95 percent standard of emission reduction reflects what is achievable with the application of the BSER (routing to an existing control device or process). While EPA is aware that combustors and utility flares may be capable of achieving instantaneous control efficiencies greater than 95 percent, we believe that affected facilities can continuously meet a 95 percent emission standard. In determining BSER, the EPA must determine that the control efficiency can be achieved by the affected facilities to which it applies. However, the final rule does provide an exemption in certain circumstances where it is technically infeasible to connect the pump to an existing control device. Additionally, if there is not a control device or process available on site that is capable of reducing emissions by 95 percent, we are still requiring the owner/operator to route the pneumatic pump emissions to a control device or process that achieves a different level

of emission reductions. For a more comprehensive discussion of this issue, please see response to DCN EPA-HQ-OAR-2010-0505-7337, Excerpt 229.

With respect to the commenter's assertion that pneumatic pumps do not present a major source of emissions based on low flow and emissions or intermittent use, we agree that there are some pumps that would have minimal emissions. Therefore, the final rule does not include piston pumps in the definition of pneumatic pump affected facility. Additionally, we are exempting diaphragm pumps at well sites that operate less than 90 days in a calendar year. See section VI.D.1 of the preamble to the final rule for a discussion of piston pumps and section VIII.E.3 for a discussion on limited-use pumps.

Commenter Name: Don Anderson, Director of Environmental

Commenter Affiliation: MarkWest Energy Partners, L.P.

Document Control Number: EPA-HQ-OAR-2010-0505-6957

Comment Excerpt Number: 38

Comment: In the alternative, should EPA promulgate final NSPS OOOOa requirements for pneumatic pumps, MarkWest supports the proposed rule language requiring no more than 95% control for pneumatic pumps. Higher levels of control are not technically feasible or cost effective. We understand EPA agrees with this position. For example, EPA's detailed cost analysis for 40 C.F.R. Part 63, Subpart HHH correctly recognizes control efficiency above 95% may not be technically feasible. *See Technology Review for the Final Amendments to Standards for the Oil and Natural Gas Production and Natural Gas Transmission and Storage Source Categories*, Memorandum to Greg Nizich, Bruce Moore, EPA, at 2 (April 17, 2012) ("Test data indicates that levels of control above 95 percent have not been shown to be reliably achieved in the field. Based on this analysis, we conclude that 98 percent control [is] neither technologically nor economically feasible at this time.").

A capture rate of higher than 95% from a pneumatic pump on a vapor recovery unit would require compression of extremely low volumes of low-pressure gas, in order to overcome back pressure into the pump from the vapor recovery system. In addition to adding substantial cost, compressing these low volumes of gas will generate other emissions that would almost certainly negate any environmental benefit from their capture.

Additionally, during upset events, back pressure from a control system on a pneumatic pump could pose a safety hazard. Pressure buildup on the pump could rupture a diaphragm and create a much larger human and environmental health hazard than the emissions being targeted for capture. MarkWest supports the more specific comments of the GPA on this issue, in particular.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6930, Excerpt 48.

Commenter Name: C. William Giraud
Commenter Affiliation: Concho Resources Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6847
Comment Excerpt Number: 7

Comment: Concho agrees with EPA that it is inappropriate to require a greater than 95% emission reduction. If the EPA were to require more than that, the higher level of control would not be technically feasible, nor would it be cost effective. In addition, production streams are variable and at a much greater pressure when coming out of a pneumatic pump, making it technically infeasible to utilize a control system. Additionally, the volumes of gas being controlled are incredibly small so that the emissions produced through compression would easily outweigh any environmental benefit from being captured. EPA has previously acknowledged that "test data indicated that levels of control above 95 percent have not been shown to be reliably achieved in the field."

Response: See response to DCN EPA-HQ-OAR-2010-0505-6930, Excerpt 48.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:00 AM - 7:55 PM; Public Hearing #1 - Denver, Colorado
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7337-1
Comment Excerpt Number: 234

Comment: Regarding pneumatic pumps at well sites and transmission facilities, we recommended an increase from the proposed 95 percent control to 98 percent control. Again, this is achievable through current combustion technology and is the presumptive Best Available Control Technology standard in Wyoming.

Response: See the response to DCN EPA-HQ-OAR-2010-0505-7337, Excerpt 229.

Commenter Name: Ben Shepperd
Commenter Affiliation: Permian Basin Petroleum Association
Document Control Number: EPA-HQ-OAR-2010-0505-6849
Comment Excerpt Number: 85

Comment: EPA states affected pumps and pneumatics will require emission controls to 95%, if control devices are available at the site. The PBPA requests that EPA clarify if a single high volume flare would be expected to combust the low pressures emitted from a chemical pump or gas actuated pneumatic. The PBPA believes such expectation would not be practical. Instead, it should only be required if a dual-type flare is currently at the facility or if a vapor recovery unit is present on the site.

Response: The final rule does not specifically define control devices for pneumatic pumps. The final rule requires the owner/operator to route pump emissions to any control device or process available on site. We have revised the final rule to allow for an exemption where it is technically infeasible for the pump emissions to be routed to the existing control device or process due to design or safety issues. The instance cited by the commenter of a single high volume flare could be a scenario which the owner/operator would analyze in order to determine if it was technical feasibility to route the emissions to the flare, and if it was determined to be infeasible, then the pump would potentially qualify for the exemption. Therefore, the EPA does not believe it is necessary to provide for this clarification.

Commenter Name: Darin Schroeder, David McCabe, Lesley Fleishman and Conrad Schneider

Commenter Affiliation: Clean Air Task Force et al.

Document Control Number: EPA-HQ-OAR-2010-0505-7062

Comment Excerpt Number: 71

Comment: However, EPA must strengthen its proposal in order for the standards to achieve BSER. First, outside of processing plants, EPA's proposal only requires control of pneumatic pumps at sites with control devices, and does not require control at sites that do not have a control device, but do have a VRU or equipment installed which could use the gas vented from the pneumatic pump, such as a heater or boiler. EPA acknowledges that gas from pneumatic pumps can readily be routed to a VRU, and the proposed standards allow gas from pumps to be routed to a process as an alternative to routing to a control device. Nevertheless, operators are only required to control emissions from pneumatic pumps if a control device is present on site. In fact, pneumatic pumps outside of gas processing plants are only affected facilities if a control device is present on site. Therefore, operators of pneumatic pumps at well pads with VRUs or other suitable processes such as boilers, but without control devices, will not be required to control emissions from pumps, even though the emissions could readily be routed to the VRU or process.

Second, EPA does not require the use of electric pumps at non-processing plant sites, such as compressor stations, large production sites, and sites of all sizes in urban areas, where electricity is available, either from the grid or generated on-site. Electric pumps, including solar-powered pumps, are available for chemical injection. Electric glycol circulation pumps are also available. According to API, electric injection and glycol circulation pumps are more efficient than using instrument air to drive pneumatic pumps. These non-emitting technologies are preferable to routing emissions from pumps to control devices.

Suggested Approach

Similar to the approach we suggest for pneumatic controllers below in Section VI.D, EPA should first require non-emitting pumps at facilities where electricity is available (from the grid or generated on site). Electricity is generally available at large compressor stations, large production facilities and sites of all sizes in urbanized areas. Alternatively, operators should route emissions to a process instead of installing zero-bleed technologies. The standards should require operators

of sites without access to electricity to route emissions from pneumatic pumps to a process such as to a VRU or fuel line, if available on site. If routing to a process is not available at a site, operators should route emissions to a control device, though this approach is less protective than non-emitting technology (electric pumps) or routing to a VRU or process.

We suggest that all new and modified natural gas-driven pneumatic pumps at non-gas processing plants be treated as affected facilities, so that EPA can collect data on all pneumatic pumps using the provisions of proposed § 60.5393a(b)(2) and § 60.5420(b)(8). These affected pneumatic pumps should be required to emit no natural gas at sites with electricity, or route all emissions to a VRU or process if available on site. If neither electricity nor a VRU or process is available at a site, operators should route all emissions from pneumatic pumps to a control device if one is available on site. As many operators use solar-powered pneumatic pumps, EPA should consider the potential for solar on-site power as available electricity. EPA could develop a map based on solar radiation to determine which areas of the country have the potential for continuous operation of solar-powered pneumatic pumps.

Response: The commenter presents several concerns with respect to applicability and control options for pneumatic pumps. We agree that the proposed rule had some ambiguity with respect to the definition of pneumatic pump affected facility. The final rule defines all pneumatic diaphragm pumps at well sites and natural gas processing plants as affected facilities regardless of whether there is an existing control or ability to route to process on site. Further, the final rule requires the owner/operator to connect the pneumatic pump emissions to either a control device or process that is available on site.

With respect to the use of electric or solar pumps at non-processing plant sites, we disagree that the rule should require use of these pumps. In the proposal TSD, we discuss the difficulty in determining if electric power is available in a sufficient and reliable manner such that a requirement to use electric pumps would be feasible. We cannot reasonably determine that reliable and sufficient electric power will be available to affected facilities at other than natural gas processing plants, and therefore cannot identify electric pumps as BSER for the production and transmission and storage segments. Further, the EPA believes that solar-powered pumps are not necessarily available in the size and configuration for all applications in these segments. We have determined BSER for pneumatic pumps in the production and transmission and storage segments to be routing to an existing control device or process available on site.

Commenter Name: Jill Morrison

Commenter Affiliation: Powder River Basin Resource Council

Document Control Number: EPA-HQ-OAR-2010-0505-7240

Comment Excerpt Number: 4

Comment: Regarding pneumatic pumps at well sites and transmission facilities we also recommend an increase from the proposed 95% control to a 98% control. Again this is achievable through current combustion technology and is the presumptive Best Available Control Technology (BACT) standard in Wyoming.

Response: See the response to DCN EPA-HQ-OAR-2010-0505-7337, Excerpt 229.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:00 AM - 7:55 PM; Public Hearing #1 - Denver, Colorado

Commenter Affiliation: None

Document Control Number: EPA-HQ-OAR-2010-0505-7337-1

Comment Excerpt Number: 254

Comment: Regarding pneumatic pumps at well sites and transmission facilities, we recommend an increase from the proposed 95 percent, again, to the 98 percent control. As I understand it, this is achievable and you have capability to do that.

Response: See the response to DCN EPA-HQ-OAR-2010-0505-7337, Excerpt 229.

Commenter Name: Howard J Feldman

Commenter Affiliation: American Petroleum Institute

Document Control Number: EPA-HQ-OAR-2010-0505-6884

Comment Excerpt Number: 72

Comment: EPA estimated emission reductions and costs of controls for the production sector. A review of the cost analysis for the proposed controls for pneumatic pumps indicates that EPA underestimated costs and likely overstated emission reductions.

2.2.1 Pneumatic Pump Control Costs

EPA estimated the cost of control, i.e., routing a pneumatic pump vent to an existing control device, as a one-time cost of \$2000. Using a 7 percent discount rate over 10 year estimated life of a pump, the annualized cost of control was estimated at \$285/year. EPA's reference for the cost estimated is from a NG STAR Fact Sheet for routing a glycol dehydrator circulation pump vent to an existing vapor recovery unit (VRU). The value assumed is an underestimate of the total cost that would be required for engineering design and piping installation for a vent system retrofit to route a very low flow, low pressure vent stream to an existing flare or VRU. This estimate is also inconsistent with the estimated cost of \$23,252 assumed for routing a wet seal compressor vent to an existing control device (Section 8.4.4.3 of TSD). ERM believes the value of \$23,252 is closer to the uninstalled capital cost that would be incurred. Utilizing EPA's assumed 7 percent interest rate, this equates to an annualized cost of \$3,308. Note that this estimate does not include the engineering and design analysis needed to ensure that the control device has adequate capacity and that the flow characteristics for a low flow, low pressure source can safely be routed into the existing flare or VRU header. The costs also do not include the recurring annual costs associated with monitoring and testing at sites not otherwise subject to Subpart OOOOa.

EPA Underestimated The Cost Of The Proposed Control Strategy Which Renders It Not Cost Effective In Many Situations.

In the cost analysis for the proposed control strategy for pneumatic pumps, EPA incorrectly only listed a one-time capital cost impact of \$2,000 for the design and installation of piping to route vapors from the exhaust of a pneumatic pump to an existing control device. This value was based upon Natural Gas Star program data. Using a 7% interest rate, EPA estimated the annualized cost of controlling a pneumatic pump at \$285/year.

This value is too low and does not include significant cost items required by the rule. As an example, EPA assumed a cost of \$23,252 for tying a wet-seal centrifugal compressor seal-oil degassing tank into an existing control device. The low pressure nature of both pneumatic pump exhaust and a seal-oil degassing tank are similar. Unfortunately, the Technical Support Document for Subpart OOOOa (TSD) discussion of pneumatic pump control and seal-oil degassing control is not detailed enough to understand the difference in EPA's cost estimates.

API believes the average capital cost (inclusive of engineering) that would be incurred for design evaluation, designing, and construction of the piping to tie a pneumatic pump into an existing control device/system would be closer to \$5,800 and would vary considerably from site to site

Following are the details of API's initial capital cost estimate.

- Collecting the site specific information on an existing control device/system and performing an engineering evaluation of the ability to safely and technically add pump exhaust gas to the control device/system. Eight (8) hours of engineering time at \$185 per hour = \$1480.
- Evaluating the specific pump's ability to tolerate the exhaust backpressure necessary to route to the existing control device/system; designing the piping necessary to route a pump exhaust to the control device/system; specifying materials, connection points, and connection types for routing a pump exhaust to the control device/system; and writing a work-order and procedure for connecting. 8 hours of engineering time at \$185 per hour = \$1480.
- Ordering and collecting materials for installing the piping, commissioning a contractor to perform the work, and overseeing the work. Six (6) hours of construction specialist time at \$140 per hour = \$840.
- Travel to the site, installation of the piping for tie-in, verification of the proper functioning of the tie-in and travel from the site. One day of a contract construction crew time at \$2,000 per day = \$2,000.
- Utilizing EPA's assumed 7% interest rate, this equates to an annualized initial capital cost of \$826 rather than EPA's value of \$285.

In addition to underestimating the capital costs of routing the emissions to a control device, EPA did not consider other significant initial and reoccurring costs that would be incurred. The proposed rule requires an existing control device and closed vent system with a pneumatic pump routed to them to comply with the same performance testing, closed vent system, continuous monitoring, and recordkeeping and reporting requirements applicable to closed vent systems and

control devices specified for centrifugal compressor affected facilities. The majority of the existing control devices and closed vent systems installed on sites where pneumatic pumps are likely to be used will not already be subject to Subpart OOOO or Subpart OOOOa requirements let alone those for centrifugal compressor affected facilities. The probability is near zero that an existing control device subject to the centrifugal compressor affected source requirements for closed vent systems and control devices will be on a site where a pneumatic pump source is located.

Most already installed or newly installed control devices/systems and closed vent systems will predate the requirements of Subpart OOOO or Subpart OOOOa be installed pursuant to State regulations or enforceable permit conditions that limit emissions below the thresholds for applicability of Subpart OOOO or Subpart OOOOa. As such, costs not included in EPA's analysis are:

- The costs for an initial M21 demonstration that the closed vent system, at a site not already subject to the requirements under Subpart OOOO, is operating with no detectable emissions.
- The costs for initial and periodic performance testing of a control device that is not already subject to the required performance testing.
- The costs for monthly smoke inspections, including travel to and from the site for a trained visual smoke inspector.
- The costs for design, installation and maintenance of a parametric monitoring system.
- The recordkeeping and reporting cost.

The table below [Table 24-1 Pneumatic Pump Control Cost Table provides cost items for initial cost and annualized costs for several scenarios] provides a more complete estimate of the costs associated with implementing the proposed rule requirements for pneumatic pumps. This table reflects the true cost of compliance with the rule, including potential source testing, the need to install monitoring equipment, and the costs of conducting recurring inspection and equipment maintenance that would all be triggered by the proposed compliance requirements. Note that none of the performance testing exemptions listed in §60.5413a (a) 1 -7 are considered. It should be noted that:

- Heaters with a design capacity of 44 MW (150 million BTU/hr) will not occur in the types of sites where pneumatic pump affected sources will be used
- Heaters used at well sites and other remote sites are likely to be seasonally used, or have intermittent firing dependent on heat demand and hence will not be able to accept the exhaust gas from a pneumatic pump as part or all of the fuel at all times
- As discussed previously, an existing control device is almost certainly not already subject to the performance testing requirements of §60.5413 and hence not manufacture certified.
- Hazardous waste incinerators or hazardous waste fueled heaters will not occur at the type of sites where pneumatic pump affected sources will be used.

Tables that follow this section -

[Table 24-1 Pneumatic pump Control Cost Table provides cost items for initial cost and annualized costs for several scenarios, Table 24-2 Retrofit Costs for Control Devices, Table 24-3 Average Pneumatic Pump Emission Rate (reproduced from the TSD)]

Combining the complete estimate of actual costs for routing a pneumatic pump affected source to an existing control device with the emission estimates for piston pumps and diaphragm pumps from the Technical Support Document (repeated in proposed rule preamble) yields the following tables of control cost per ton for methane, VOC, and from a multipollutant approach consistent with that used by EPA for the proposed rule.

[Tables following this section, Table 24-4 Piston Pump Control Cost Effectiveness (assuming 8760 hours of annual pump operation) and Table 24-5 Diaphragm Pump Control Cost Effectiveness (assuming 8760 hours of annual pump operation). These tables present CE as calculated using the costs from Tables 24-1 and 24-2]

While EPA does not establish a bright line that separates what they consider to be reasonable and unreasonable with regard cost effectiveness, the proposal provides indications of levels that EPA clearly considers to be unreasonable. On page 56636 of the September 18, 2015 Federal Register notice proposal, EPA indicates: “In a previous NSPS rulemaking [72 FR 64864 (November 16, 2007)], **we had concluded that a VOC control option was not cost-effective at a cost of \$5,700 per ton.**” While EPA does not make an affirmation that is as clear-cut for methane, EPA’s decisions establish a precedent. For quarterly OGI monitoring for well sites, EPA estimated the cost effectiveness levels shown in Table 24-6. For this option, EPA determined that “we find that the cost of monitoring/repair based on quarterly monitoring at well sites using OGI is not cost-effective for reducing VOC and methane emissions under either approach.” (80 FR 53363). Therefore, since EPA rejected this alternative with a cost effectiveness of \$1,761 per ton of methane reduced, this clearly establishes that EPA believes that \$1,761/ton of methane is unreasonable.

[Table 24-6 EPA's Cost Effectiveness with Savings (\$/ton) for Quarterly OGI Monitoring at Well Sites, data from TSD]

As illustrated above in Table 24-4, for piston pumps, the control costs for the only likely scenarios of an existing control device and closed vent system having no performance testing or monitoring requirements under Subpart OOOO or an existing control device and closed vent system being subject to only the Storage Tank performance testing and monitoring requirements under Subpart OOOO exceed the reasonable cost of control per ton whether viewed from a single pollutant standpoint or from a multipollutant standpoint. The only reasonable control costs found were for an existing control device and closed vent system that is already subject to the performance testing and monitoring requirements specified in the proposed rule and this was only cost effective under the multi-pollutant approach. As explained in more detail earlier in these comments, the probability of this occurring is near zero.

For diaphragm pumps, the cost effectiveness values shown above are lower due to the higher emissions. However, as discussed further in 0, diaphragm pumps are generally used for heat tracing and as such are not used everywhere and, when they are used do not operate year round.

Using a more realistic estimate of 4 months of operation per year, the emissions from these pumps are actually [one third] the level assumed by EPA. The table below reflects the cost effectiveness of controlling diaphragm pumps after accounting for their non-year round operation.

[Table 24-7 Diaphragm Pump Control Cost Effectiveness (assuming 4 months of annual pump operation)]

After accounting for the non-year round operation of pneumatic pumps, it is again the case that the only clearly reasonable control costs found were for an existing control device and closed vent system that is already subject to the performance testing and monitoring requirements specified in the proposed rule. As explained in more detail earlier in these comments, the probability of this occurring is near zero. The case of control with a device that is subject to the storage vessel control requirements under Subpart OOOO result in marginal cost effectiveness, but only under the multipollutant scenario.

This illustrates the need for EPA to revise the proposed rule's approach to performance testing and monitoring for control devices and closed vent systems used for pneumatic pump affected sources as previously explained earlier in these comments.

Note: The above conclusions are drawn even without accounting for the additional costs for recordkeeping and reporting, which were also not considered by EPA when evaluating the cost effectiveness of pump control options.

Response: The commenter has reviewed of the proposed costs for routing of a pneumatic pump's emissions to an existing control device, and expressed concerns that the costs are not representative of the true costs for the proposed control requirements. To preface a response on the scope of the concern about the costs, we note several changes made to the final rule that affect the discussions of costs presented in the comments:

- Several comments note that the costs did not include the retrofit of existing control devices to accommodate low flow, low pressure emission streams as would be expected from these pumps. The comments also reflect concern about safety hazards and other technical aspects of connecting pumps to control devices that are not able to handle the emissions streams for various technical reasons, or the potential to have to add compression to the flow lines in order to move the emissions streams to a control device. The EPA revised the final rule to include an exemption for technical infeasibility that allows the owner/operator, through an engineering evaluation, to show that the existing control device or process cannot accommodate the pump emissions or that it would cause a safety hazard or operational issues with respect to the pump, process, or control device. The final rule does not require retrofit of any control devices or processes such that they would be able to be used to control pump emissions. Further, the EPA is not requiring owners/operators to implement measures such as adding compression to the flow line in order for the control device to accept the emissions stream. Issues such as these would be considered in a claim for technical infeasibility.
- The final rule has removed compliance requirements for control devices used to control pneumatic pump emissions. Because these control devices already existed on site and were

installed for reasons other than controlling pneumatic pump emissions (e.g., under federal, state, or other requirements), we have determined that those control devices are already subject to compliance requirements under those pre-existing regulations and therefore we do not need to place new compliance requirements on those existing controls under subpart OOOOa. As a result, the final rule does not include new compliance requirements for existing control devices, but does require the owner/operator of the pneumatic pump affected facility to keep records related to documenting the actual control efficiency achieved by an existing control device if it is lower than 95 percent. The rule does require the same closed vent installation and operation compliance requirements as centrifugal compressors. As in all rules, compliance costs are not included in the cost effectiveness calculation and are included in the supporting statement for the final rule.

- The emissions factors used for the BSER analysis incorporate the fact that these pumps are used much less than 100 percent of the year. Therefore, we believe the emission reductions included in the cost-effectiveness calculations are representative for these pumps.

With respect to the commenters' comparison of the pump control costs to the \$23,252 capital costs used for centrifugal compressors, we note that centrifugal compressor costs are for a different source with a different emission profile. The BSER requirement for pumps is to route to an existing control device or process onsite, while BSER for centrifugal compressors involved different technologies. Therefore, we do not believe these centrifugal compressor costs are appropriate comparison for the pneumatic pumps control scenario.

With respect to the cost of routing pump emissions to an existing control device, two commenters provided additional cost information which we have incorporated into our BSER analysis for the final rule. One commenter (see DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 72) stated that there are additional costs for engineering design and evaluation with respect to connecting the pumps to an existing control device and that the capital cost should be \$5,800 instead of the \$2,000 capital cost included in the proposal. Another commenter (see DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 26) stated that there may be a significant distance between the pump and the existing control device, requiring more pipe and connectors to route emissions to the control device and that the capital cost should be \$8,500 instead of the proposed capital cost. This commenter also included \$50,000 in costs to bury pipe in their cost estimate. Although this may be the case in some instances, we do not agree that it would be common practice to bury all pipe and that we should include this additional cost in our BSER cost analysis.

Based on the detail provided by the commenters for their cost estimates, we believe these estimates are comparable to the proposed cost estimate. Therefore, we treated these estimates as additional cost estimates for connecting a pneumatic pump to an existing control device or process. To consider these additional estimates, we averaged these two estimates (\$5,800 and \$8,500 respectively) with the proposed capital cost of \$2,000 and estimated a revised capital cost of \$5,433 for this control option. Based on the 7 percent discount rate, we also calculated annualized costs of \$826 and \$1,210, respectively for the commenter cost estimates. We averaged those with the proposed annualized cost of \$285, and estimated a revised annualized cost of \$774, incorporating the additional costs presented by the commenters. We then used this revised annualized cost for the BSER analysis. As shown in the TSD to the final rule, we still consider the cost-effectiveness for this control option to be reasonable.

Commenter Name: Matthew Hite
Commenter Affiliation: Gas Processors Association (GPA)
Document Control Number: EPA-HQ-OAR-2010-0505-6881
Comment Excerpt Number: 26

Comment: EPA Significantly Underestimates the Cost of Emission Controls for Pneumatic Pumps

EPA's cost estimates for controlling emissions from pneumatic pumps are flawed and significantly underestimate the costs that will be required to connect pneumatic pumps to existing onsite control devices. In the proposed rule, EPA estimates that the installation costs to connect pneumatic pumps to existing control devices will be \$2,000. EPA, Oil and Natural Gas Sector: Standards for Crude Oil and Natural Gas Facilities 164, 166-67 (Aug. 2015). This data is derived from EPA's Natural Gas Star program. However facilities participating in EPA's Natural Gas Star program are not representative of the industry as a whole. Instead, facilities that self-select to recognize this technology under the program are likely to have done so voluntarily due to the relative ease and low cost to implement these changes. However, in most cases, existing control devices were not designed to accommodate the emissions from pneumatic pumps and are likely not conveniently located to connect piping. This means that longer piping runs will be required in most instances resulting in a substantially higher cost to implement this control requirement than EPA has estimated.

Using our expert judgment as operators of the vast majority of pneumatic pumps in the midstream sector, as well as estimates of equipment capital and installation costs, GPA estimates that implementation costs will be much greater than \$2,000. This is based on the typical location of the storage tanks and combustor being up to 200 feet away from the compressor buildings that typically house the affected pneumatic pumps. Another major cost driver would be the need to protect the pipe against condensation and freeze-up, most likely done by burying the pipe for remote stations without electrical line power. GPA's assumptions are provided below:

Assumptions per source for cost estimate:

- 50 feet of 1-inch diameter pipe to tie into header.
- Materials and installation is \$30/foot (50 feet x \$30/foot = \$1,500)
- Tie sources into 2-inch header based on 200 feet between compressor units and to the combustor header: 200 feet x \$35/foot = \$7,000.
- Install Costs 250 feet x \$200/foot to bury pipe = \$50,000

Based on GPA's estimates, the total cost to tie into existing installing controls for emissions from pneumatic pumps would be \$58,500, assuming the existing device has capacity to control these emissions.

Additionally, routing emissions to a control device poses an environmental and safety risk for devices that were not engineered and originally designed to accept the flow rate from additional sources. This is especially a concern for vapor recovery units which were designed to operate in a narrow pressure range, where additional flow might cause a bypass of the unit to atmosphere. In addition, significant technical and safety concerns can arise with routing a pneumatic pump to an existing flare or combustor. An existing device may be designed to handle only flows at a certain pressure range that is different than the pressure of a pneumatic pump discharge. Connecting lines at different pressures can create backflow risks. In addition, routing vent lines from pumps potentially several hundred feet with elevation changes and cooling creates a risk of liquid pooling in the vent line. If liquid pockets then carry over into the flare or combustor, there is risk of fire balls projecting from the device. EPA did not consider the cost in the rule to update or replace existing sources to be able to meet the additional flow from connecting multiple sources.

GPA has used its revised cost estimate for installing pneumatic pump controls to develop new cost-benefit tables for controlling emissions from pneumatic pumps. Those revised cost estimates are included as Attachment A. The per-ton emission reduction costs calculated by GPA are significantly higher than those calculated by EPA. In fact, for many pneumatic pump and industry segment combinations, the emission reduction costs become prohibitively high. In light of GPA's revised cost estimates, GPA urges EPA to eliminate the proposed requirements for pneumatic pumps. However, as described below, GPA offers a number of additional comments in the alternative, in the event that EPA finalizes a rule that includes pneumatic pumps.

[Attachment 1 contains "Cost Effectiveness of Pneumatic Pump Controls", which contains four tables and the following description: The EPA's estimate of cost savings from the rule is misleading. By adjusting the value in the equation closer to actual costs for Routing Equipment, the average cost/ton is much greater than the figure EPA used. See tables below. Original Figures, (Source: Docket EPA-HQ-OAR-2010-0505, Support Document: TSD Section 7 Pneumatic Pumps 073015)]

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 72.

Commenter Name: Thure Cannon, President

Commenter Affiliation: Texas Pipeline Association (TPA)

Document Control Number: EPA-HQ-OAR-2010-0505-6927

Comment Excerpt Number: 28

Comment: Pneumatic pumps generally account for relatively small amounts of emissions, yet the expense and effort needed to comply with the rule would be substantial, and in many cases out of proportion to any environmental benefits that were obtained. The proposed rule would require the owner or operator to install piping to connect a pneumatic pump to an on-site control device; in addition, if there was a substantial distance between the pump and the control device, then additional equipment would also have to be installed to increase compression to move the gas across the distance of pipe and to achieve the appropriate velocity to the control. All of this

would entail significant expenses -and additional emissions from piping leaks and compression emissions - in order to achieve controls on a relatively small amount of pollutants. The cost and effort would be especially high if the pump was located hundreds of yards across a plant site from the on-site control - a scenario that is entirely possible.

Notwithstanding these real-world considerations, EPA has assumed that the cost of routing pneumatic pump emissions to an existing control device or an existing capture system would only be \$1,500 per device. This estimate is unrealistically low; indeed, it appears to be contradicted by EPA's own assessments for similar processes. Specifically, in contrast to the \$1,500 estimate for routing pump emissions to an existing control device, EPA has estimated that the cost of routing compressor wet seal emissions to an existing control device is over \$23,000. It is hard to understand now EPA can conclude that routing pump emissions to an existing control would entail less than one tenth of the expense of routing compressor emissions to an existing control. In addition, EPA has also failed to consider costs that could be incurred in addition to the cost of simply installing piping to connect the pump to the existing control device. Additional costs would be incurred as a result of the engineering and design analyses that would be required before emissions from a new source could be routed to existing controls.

In sum, EPA's proposal is an example of a requirement that would entail substantial expense and effort but would yield minimal environmental benefits. For this reason we believe that EPA should not finalize the proposed 95 percent control requirement for pneumatic pumps.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 72.

Commenter Name: Lee Fuller, Executive Vice President, and V. Bruce Thompson, President

Commenter Affiliation: Independent Petroleum Association of America (IPAA) and the American Exploration and Production Council (AXPC)

Document Control Number: EPA-HQ-OAR-2010-0505-6983

Comment Excerpt Number: 47

Comment: IPAA/AXPC's primary concern with the proposed requirements for pneumatic pumps is that EPA has overestimated the ease (and thus the cost) of sending captured gas to an existing combustion device. It is not as simple as plumbing a line from the pump to the control device. The intermittent nature of the gas flow and low pressures can create serious safety and operational difficulties if not appropriately designed along with significantly increasing engineering costs associated with the closed vent system upgrades. The difference between the amount of gas being vented from a storage tank and the amount of gas coming from a pneumatic pump is large, and designing a closed vent system to properly account for this pressure differential would be exceedingly difficult and costly. To meet the needs of both components, the final design would likely have the potential to increase emissions (such as being forced to use a small compressor or being forced to set thief hatches at different pressures that in turn cause more emission events from the tanks) than if the pump was vented directly to the atmosphere. The volume of gas to be captured from pneumatic pumps is relatively small, and when EPA more accurately reflects the cost associated with capturing the gas and routing it to an

existing control device, IPAA/AXPC questions whether the proposed controls will be cost-effective.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 72.

Commenter Name: John Robitaille

Commenter Affiliation: Petroleum Association of Wyoming (PAW)

Document Control Number: EPA-HQ-OAR-2010-0505-6854

Comment Excerpt Number: 35

Comment: Likewise, in the cost analysis for the proposed control strategy for pneumatic pumps, EPA incorrectly underestimated the capital costs of routing the emissions to a control device. EPA erroneously accounted only for a one-time cost impact for the design and installation of piping to route vapors from the exhaust of a pneumatic pump to an existing control device. Furthermore, EPA did not consider other important costs such as the engineering and design analysis needed before connecting a new emission source to an existing control system and the costs for testing and monitoring at sites not otherwise subject to subparts OOOO or OOOOa. EPA's proposed compliance requirements for a control device used to control vapors from a pneumatic pump would lead to significant increases in compliance costs for many or most control devices because most control devices are not subject to subpart OOOO either because they pre-date subpart OOOO or because they have other enforceable permit limits.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 72.

Commenter Name: Wesley D. Lloyd, Freeman Mills PC

Commenter Affiliation: Texas Independent Producers and Royalty Owners Association (TIPRO)

Document Control Number: EPA-HQ-OAR-2010-0505-6893

Comment Excerpt Number: 18

Comment: EPA's proposal to require pneumatic pumps fails to consider the true difficulty and cost of transferring captured gas to an existing combustion device. Pneumatic pumps lack cost efficiency when considering the relatively small volume of gas captured. There are also safety and design concerns with the proposed pneumatic pump requirements. The costs associated with implementing a closed vent system upgrade capable of reducing the risks are exorbitant to the point of being prohibitive.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 72.

Commenter Name: Howard J Feldman

Commenter Affiliation: American Petroleum Institute

Document Control Number: EPA-HQ-OAR-2010-0505-6884

Comment Excerpt Number: 75

Comment: EPA's estimates of baseline emissions and emission reductions are overstated, as indicated in the sections below.

Overestimate of Diaphragm Pump Baseline Emissions

EPA assumed that both diaphragm pumps and chemical injection pumps operate continuously, year round, i.e., 8,760 hours of operation per year. However, EPA acknowledges that diaphragm pumps are used for circulation of heat transfer fluids to prevent freezing, meaning that they are commonly only operated seasonally. A better estimate of the actual time in operation is 3 – 4 months per year. Using 4 months per year as an average time in service, the emission reductions for diaphragm pumps are one-third the value that EPA assumed in the cost analysis.

EPA Overstated The Emissions, And Therefore The Benefits, Of The Proposed Requirements For Pneumatic Pumps

EPA has overestimated the emissions from diaphragm pumps. As EPA notes in Section 7.1 of the TSD: "Diaphragm pumps are commonly used to circulate hot glycol or other heat-transfer fluids in tubing covered with insulation to prevent freezing in pipelines, vessels and tanks." As such, these pumps only during the winter season which represents a fraction of the year on average. Yet, EPA has assumed these pumps operate 8,760 hours per year when estimating emissions. This assumption grossly inflates the actual emissions from these sources. A more realistic estimate would be that these sources would operate 3-4 months during the course of the year and rarely more than 8 months per year. Using this more realistic estimate of hours of operation, the values in Table 7-17 change dramatically for diaphragm pumps – both in terms of emissions reduced and gas recovered by use of a VRU. Also, using diaphragm pumps to circulate heat-trace fluids is only practiced in climates with cold winters (e.g. Wyoming) and does not occur in warmer climates.

Diaphragm pumps are also used intermittently to transfer bulk fluids such as engine oil or emptying a sump. When used for these types of service they do not run for long periods, are not large emission sources and should not be subject to regulation under Subpart OOOO.

API recognizes the need for EPA to simplify analysis for assessing cost benefits for this rulemaking. EPA presents values in Table 7.2 which are based on a number of assumptions. It should be noted that the exhaust rates from pneumatic pumps are, in reality, based on assumed pump rate, a gas-supply pressure, and a pump model. All of these values vary considerably from site to site and even from pump to pump on a given site. When one reviews several manufacturer's pumps, it is readily apparent that they all have a multiplier factor for calculating required supply pressure and allowable exhaust pressure and these factors vary by over two orders of magnitude from one pump model to the next.

Response: The EPA agrees with the commenter that there are limited-use pumps that would have very minimal emissions and do not warrant control requirements. We have revised the final rule to reflect that pumps at well sites that operate less than 90 days per calendar year are not

considered affected facilities. The owner or operator must keep records to document that a pump is considered a limited-use pump. See section VIII.E.3 of the preamble to the final rule for further discussion of this issue.

Commenter Name: Howard J Feldman

Commenter Affiliation: American Petroleum Institute

Document Control Number: EPA-HQ-OAR-2010-0505-6884

Comment Excerpt Number: 162

Comment: EPA's estimates of baseline emissions and emission reductions are overstated, as indicated in the sections below.

Overstatement of Methane Composition for Oil Well Sites

EPA assumed that the methane composition for the vent from all pneumatic pumps in production is consistent across all well sites at 82.9 percent methane by volume. Similar to the discussion above for methane composition for fugitives from oil well sites, a better estimate of methane composition is 69.5 percent by volume. This corrected estimate was assumed in the revised estimates of net benefits from pneumatic pump controls at production well pads.

Response: The natural gas composition used for the BSER analysis was determined using gas composition data from the 1996 GRI study which provided gas composition data for all areas of the country. From that analysis, the normalized average volume percent methane was 82.9 percent which is comparable to 65.7 percent by weight. Because the gas composition analysis was based on a robust data set representing the best available nationwide information, we believe that the volume percent used in the BSER analysis is representative of nationwide values for methane in natural gas.

5.4 Applicability Threshold for Small Pumps

Commenter Name: Richard T. Metcalf

Commenter Affiliation: Louisiana Mid-Continent Oil and Gas Association (LMOGA)

Document Control Number: EPA-HQ-OAR-2010-0505-6853

Comment Excerpt Number: 8

Comment: The final rule must address the ultimate use of these pumps. Some are in permanent use (e.g. glycol units) but many are in temporary use (e.g. chemical injection, storage tank dike rainwater evacuation, etc.). The proposal appears to treat them all the same regardless of hours of usage.

Some of the pumps are moved from facility to facility to be used "as needed". To require them to be connected to control devices makes no sense for such pumps.

The low natural gas pressure at many fields also makes it impracticable to tie these pumps (especially the temporary ones) to control devices. As previously stated, electricity is not available at many production sites in LA, so pneumatic pumps are the only practicable way to perform the needed tasks.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 75.

Commenter Name: Howard J Feldman

Commenter Affiliation: American Petroleum Institute

Document Control Number: EPA-HQ-OAR-2010-0505-6884

Comment Excerpt Number: 78

Comment: Issue – EPA is proposing to regulate low emitting sources which would add considerable expense and burden while providing very limited environmental benefit.

Recommendation – EPA should exempt low emitting pumps and low usage pumps, i.e. pumps that emit at an equivalent rate lower than a high bleed controller. This would be consistent with the position taken in Subpart OOOO and reinforced under the Subpart OOOOa proposal for pneumatic controllers

The Rule Should Have An Exemption For Limited Use/Low Emission Pumps Such As Chemical Injection Pumps.

API believes EPA's intent to regulate pneumatic pumps that have lower emission rates than continuous low bleed pneumatic controllers is inappropriate. EPA has previously determined that continuous bleed pneumatic controller devices emitting less than 6 scf/hour did not require control and EPA continues to support that position in the Subpart OOOOa rule proposal. EPA's Technical support document shows the assumed emission rate from pneumatic piston (chemical and methanol) pumps to be 2.48 scf/hour, which is less than half the 6 scf/hr threshold for

continuous bleed pneumatic controllers. The cost effectiveness of controlling such low emitting pumps is substantially above EPA's assumed \$285/ton as described Section 22.3.1. Piston pumps in services with emissions below 53,000 scf/year (approximately equivalent to 6 scf/hour annualized) should be exempt due to the low volume of gas exhausted. Demonstration of emissions below this threshold should be a one-time engineering calculation for individual pumps or a class of pumps in similar service -for example chemical/methanol pumps below a pressure & volume combination which would yield exhausted volumes above the threshold.

There are also natural gas-driven pneumatic pumps, typically diaphragm pumps, which are used intermittently to transfer bulk liquids. These are generally either manually operated as needed or are triggered by a level controller. For instance, there are engine skid sump pumps, pipeline sump pumps, tank bottom pumps, flare knockout drum pumps, separator knockout drum pumps, etc. that are used to pump liquids from one place to another. These pumps do not run continuously or even seasonally for long periods, but only run periodically as needed. Thus, these pumps do not exhaust large volumes of gas in the aggregate. For this reason, there should be an annual venting limit and an exemption for intermittently operated pumps.

EPA should provide an exemption under the rule for any pump emitting at a rate less than the rate of a continuous low bleed pneumatic controller. Specifically, any pneumatic pump which emits less than 53,000 scf/year (i.e. 6 scf/hour for an entire year) should be exempted. This would provide a reasonable exemption for intermittent use pneumatic pumps which do not have large aggregate emissions, including diaphragm pumps that are operated manually, triggered by a level controller, or operated temporarily or seasonally.

Alternatively, EPA could use the operating time of a pump with exhaust rate of 22.45 scf/hour (equivalent to assume emission rate of a diaphragm pump from the technical support document) that would result in 53,000 scf/year of emissions, which is 96.5 days. This could be rounded down to 90 days of operation, or 2,160 hours. This approach would simplify the exemption, as companies would track the hours of operation instead of calculating the exact exhaust rate.

API proposes the following amendments to §60.5365a(h)(1) and (h)(2):

“(h)(1) For natural gas processing plants, each pneumatic pump affected facility, which is a single natural gas-driven chemical/methanol pump or a natural gas-driven diaphragm pump with an exhaust rate greater than 53,000 scf/yr and that operates more than 2,160 hours per year.

(2) For locations other than natural gas processing plants, each pneumatic pump affected facility, which is a single natural gas-driven chemical/methanol pump or a natural gas-driven diaphragm pump with an exhaust rate greater than 53,000 scf/yr and that operates more than 2,160 hours per year, and for which a control device owned and operated by the owner and operator of the pump is located on site and not demonstrated to be technically infeasible to control.”

Note that there are additional revisions to §60.5365a(h)(2) proposed in Section 20 and 24.4.5. See 24.4.5 for combined language.

Response: The commenter contends that many of the pneumatic pumps that would be required to be controlled under the proposed rule are low-emitting or are low-use (being used only intermittently or temporarily) and therefore should be exempt. Several commenters recommend a threshold based on a total emissions per year (i.e., approximately 53,000 scf/yr) or hours or days of operation. The commenters recommend using the 6 scfh emission rate for low-bleed pneumatic controllers as the basis for an emission-based threshold for pneumatic pumps.

The EPA has evaluated pneumatic pumps to the level of detail necessary to differentiate among pumps according to their emissions and potential environmental impact. To preface response to the comments with respect to the commenters assertion that the rule should exempt low-emitting and low use pumps, we note several changes to the final rule that address some of the issues raised by commenters:

- The final rule requires owners/operators to route pneumatic pump affected facilities to an existing control device or process on site, but acknowledges that some control devices may not be able to achieve a 95 percent reduction. However, the EPA is still requiring owners/operators to route emissions to a control device onsite even if it achieves less than a 95 percent reduction.
- The final rule provides an exemption from control where it is technically infeasible to connect the pump to an existing control device due to line pressure, capacity in the control device, or other technical or safety issues. This exemption addresses the issues of low flow or pressure from pumps as being infeasible to route to a control device.

With respect to comments regarding limited-use pumps, we agree that there are certain pumps that are limited-use, such that their emissions would be minimal and do not warrant control. Therefore, we have revised the affected facility definition to not include pneumatic pumps that are used less than 90 days per year. See the section VIII.E.3 of the preamble to the final rule for further discussion.

With respect to low-emitting pumps, after review of comments and available data, we believe that emissions from piston pumps are inherently low, and we have revised the rule to reflect that only diaphragm pumps are covered by the requirements. See section VI.D.1 of the preamble to the final rule for further discussion of this issue

With respect to setting an emissions threshold under which pumps would be exempted, we believe that the revision to the rule with respect to the exclusion of piston pumps from the requirements will sufficiently address many of the commenters concern with respect to this issue.

With respect to a commenter's assertion that potentially routing the low-pressure pump emissions to an existing tank would make the tank subject to the NSPS requirements, this is not the intent of the rule. The final rule does not impose compliance requirements on existing control devices. Therefore, if the owner/operator routes emissions to an existing storage vessel, the compliance status of the storage vessel would not change.

Commenter Name: Cory Pomeroy, General Counsel
Commenter Affiliation: Texas Oil & Gas Association
Document Control Number: EPA-HQ-OAR-2010-0505-7058
Comment Excerpt Number: 76

Comment: Regarding technical feasibility and cost effectiveness, many pneumatic pumps are small and operate intermittently. EPA should exclude those pumps with an annualized emission rate less than 52.56 thousand standard cubic feet (Mscf), which is equivalent to the 6 standard cubic foot per hour (scfh) exemption threshold for pneumatic controller affected facilities. In addition, EPA should provide an exclusion from control requirements for certain pneumatic pumps for which routing emissions to a control device is not technically feasible.

Pneumatic pump applicability in Section 5365a(h) should include exclusions for both small chemical/methanol injection pumps and larger diaphragm type pumps. Both exclusions should be equivalent to the emissions allowance for pneumatic controllers which is ≤ 6 scf/hr of natural gas annualized. On an annualized basis, the 6 scf/hr natural gas allowance equates to 52,560 scf/yr. For small piston type injection pumps that mostly operate well below 6 scf/hr (EPA factor in the TSD of 2.48scf/hr) no control will be required in any event. For larger diaphragm type pumps, EPA's emission rate factor in the TSD of 22.45 scf/hr of natural gas equates to about 97 days of continuous operation based on an annual limit of 52,560 scf/hr allowed for pneumatic controllers. Since many diaphragm pumps are often limited use pumps for purposes such as liquid transfer, an exemption is also appropriate for limited use situations. Allowing up to 90 days of continuous use or 2160 hours/yr of operation before any control requirement will not exceed the equivalent natural gas emissions allowed/yr for a pneumatic controller. Suggested rule text changes then for 5365a(h) are then:

(h)(1) For natural gas processing plants, each pneumatic pump affected facility, which is a single natural gas-driven chemical/methanol pump **with emissions greater than 52,560 scf per yr of natural gas (where natural gas is a surrogate for methane and VOC)** or a natural gas driven diaphragm pump **operating more than 2160 hrs/yr.**

(2) For locations other than natural gas processing plants, each pneumatic pump affected facility, which is a single natural gas-driven chemical/methanol pump **with emissions greater than 52,560/yr of natural gas (where natural gas is a surrogate for methane and VOC)** or natural gas-driven diaphragm pump **operating more than 2160 hrs/yr.** for which a control device is located on site.

We note that EPA should make any conforming changes to 60.5365a(d)(1) and (2) to ensure that natural gas is being treated as a surrogate for methane and VOC and is not treated as an independently regulated pollutant.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 78.

Commenter Name: Matthew Hite

Commenter Affiliation: Gas Processors Association (GPA)

Document Control Number: EPA-HQ-OAR-2010-0505-6881

Comment Excerpt Number: 30

Comment: EPA Must Exclude Low-Use Pneumatic Pumps EPA must also exclude low-use pneumatic pumps (e.g., oil pumps, sump pumps) from Subpart OOOOa.

These sources are only used during startup and shutdown or for limited periods. It would be prohibitively expensive to install the equipment necessary to direct emission from these small intermittent use sources to control for a negligible reduction in emissions. To ensure that all low-use pneumatic pumps are excluded, GPA urges EPA to provide an exemption for all sources other than continuous use chemical injection pumps. Similar exemptions for limited use sources exist in other rules such as those found in NSPS VV and VVa (§60.486a(e)(6) and §60.486-1a(e)). We suggest similar recordkeeping provisions that require operators to keep a list of identification numbers for equipment that is designated as operating in VOC service less than 300 hr/yr in accordance with the exemption, along with a description of the conditions under which the equipment is in VOC service, and rationale supporting the designation that it is in VOC service less than 300 hr/yr.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 75.

Commenter Name: Shawn Bennett, Executive Vice President

Commenter Affiliation: Ohio Oil & Gas Association (OOGA)

Document Control Number: EPA-HQ-OAR-2010-0505-6921

Comment Excerpt Number: 10

Comment: The cost analysis used for determining pump applicability grossly underestimates the economic impact of the proposed regulation as it only takes into account the cost of the tubing leading from the pump to the control device and not the potential for imposing CVS and tank requirements on previously exempt sources. The overwhelming majority of pumps have emissions so low that there is not sufficient pressure to enter the control stream leading to an existing flare/combustor, meaning that the vent stream from the pump would first have to be routed to the tanks. Previously exempt existing tanks will now be subject to the new NSPS simply because of the minute amount of pump emissions routed to them. We strongly recommend an exemption threshold for low-emitting pneumatic pumps (less than 6 scfh, the threshold for pneumatic controllers), temporary pumps and pumps used on an intermittent basis.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 78.

Commenter Name: Douglas Jordan, Director Corporate Environmental Programs, V+ Resource Development

Commenter Affiliation: Southwestern Energy (SWN)

Document Control Number: EPA-HQ-OAR-2010-0505-6922

Comment Excerpt Number: 19

Comment: In the proposed rule, EPA considers single natural gas-driven chemical/methanol pumps or natural gas driven diaphragm pumps as a pneumatic pump affected facility. Unlike other NSPS applicability rules, there are no applicability thresholds (e.g. 6 standard cubic feet per minute) but simply an all-in requirement.

The rule does provide a level of "relief" in that only pneumatic pump affected facilities located at well sites or compressor stations in which a control device is present are to be controlled by "95% efficiency". Unfortunately it appears that in developing the rule, EPA failed to recognize that the significant majority of the pneumatic pumps at well pads and compressor stations operate infrequently or intermittently. Furthermore the agency relies solely on controlling a limited number of pneumatic pumps in Wyoming as demonstrating that applying controls to pneumatic pumps is essentially BSER.

Recommendation:

SWN recommends that EPA revisits the applicable requirements for pneumatic pumps. Applicability should include consideration based on whether the pneumatic pump operates continuously, intermittently, or infrequently. EPA should consider establishing exemptions for pneumatic pumps that physically operate below a define hour threshold (e.g. 300 hours). Operators should be allowed to use manufacturer and engineering calculations to determine if the pneumatic pump operates above or below these levels.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 75.

Commenter Name: Don Anderson, Director of Environmental

Commenter Affiliation: MarkWest Energy Partners, L.P.

Document Control Number: EPA-HQ-OAR-2010-0505-6957

Comment Excerpt Number: 37

Comment: Pneumatic pumps do not present a major source of emissions, yet the rule would require each unit to be handled like a much larger piece of equipment. The emissions and cost data do not support this approach, and we strongly urge EPA to reconsider requiring controls for such a small source. This is particularly problematic in the case of diaphragm pneumatic pumps, which are only used intermittently. These pumps, along with methanol pumps and heat trace pumps used only during winter months, have very minor emissions.

Moreover, given their intermittent status, it appears EPA never intended to regulate diaphragm pneumatic pumps, and MarkWest seeks clarification regarding its regulation of such intermittent

equipment. For consistency with EPA's approach to regulation of pneumatic controllers, if a pneumatic pump is emitting less than 6 scfh, it should be exempted from final requirements. Requiring emission control on such a small source is both impractical for the technical reasons stated above and offers minimal environmental benefit. Similarly, limited use pumps like transfer pumps and sump pumps should be exempted. Wellhead methanol pumps should also be excluded due to the infeasibility of controlling pumps with low exhaust pressure.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 75.

Commenter Name: Kathleen M. Sgamma, Vice President, Government and Public Affairs

Commenter Affiliation: Western Energy Alliance

Document Control Number: EPA-HQ-OAR-2010-0505-6930

Comment Excerpt Number: 49

Comment: If a pump is emitting less than 6 scfh it should be exempted from these standards. Requiring emission control on such a small source is both impractical for the technical reasons stated above and offers minimal environmental benefit. Similarly, limited use pumps like transfer pumps and sump pumps should be exempted.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 75.

Commenter Name: Jim Welty

Commenter Affiliation: Marcellus Shale Coalition

Document Control Number: EPA-HQ-OAR-2010-0505-6803

Comment Excerpt Number: 9

Comment: The MSC encourages U.S. EPA to consider exemptions for low emitting (less than 6 SCFH), infrequently used or temporary pneumatic pumps due to the extremely low associated emissions.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 75.

5.5 Removal of Existing Control Device

Commenter Name: Howard J Feldman

Commenter Affiliation: American Petroleum Institute

Document Control Number: EPA-HQ-OAR-2010-0505-6884

Comment Excerpt Number: 81

Comment: The Rule Should Allow For Removal Of Control Device – i.e. Pneumatic Pump No Longer Has To Be Controlled If Control No Longer Present.

If a control device is no longer needed for the purpose for which it was originally installed, EPA should clarify that any pneumatic pumps that were routed to the device should no longer require control. A control device should not be required to remain in service only for the purpose of controlling one or more pneumatic pumps. For example, NSPS Subpart OOOO allows for removal of control device from a storage vessel if emissions fall below a certain level. Specifically, under the NSPS, EPA has allowed for the removal of control devices once emissions are below 4 TPY (40 CFR 60.5395(d)(2) and 60.5395a(a)(3)). In the preamble to the NSPS OOOO revisions dated April 12, 2013 (Federal Register Vol. 78, No. 71, 22133 - 22134) EPA also noted that removal of control at 4 TPY will help relieve the control device shortage issue as well as reduce emissions from burning more pilot gas than the waste gas being burned. If a control device is removed, the requirement to route pneumatic pump exhaust to the control device should no longer be applicable.

Response: The final rule clarifies that subsequent to the removal of a control device and provided there is no ability to route to a process, a pneumatic pump affected facility is no longer required to comply with §60.5393a(b)(1) or (2). See section VIII.E.2 of the preamble to the final rule for more detail regarding this issue.

Commenter Name: Matthew Hite

Commenter Affiliation: Gas Processors Association (GPA)

Document Control Number: EPA-HQ-OAR-2010-0505-6881

Comment Excerpt Number: 32

Comment: EPA Must Clarify That a Source Ceases to Be an Affected Facility If the Control Device Is No Longer Needed for Other Equipment

EPA's proposed regulation for pneumatic pumps is based on the premise that emissions controls are only required if a compatible control device is already required for other equipment at the site. Because this is essentially a derivative requirement, EPA must clarify that a pneumatic pump ceases to be an affected facility if the control device is no longer required for other equipment. This circumstance could occur, for example, when the existing control device is installed for a Subpart OOOO or OOOOa storage vessel whose potential to emit subsequently falls below 6 tpy. If this were to occur, the storage vessel would no longer be subject to regulation and the control device would no longer be necessary. Thus, EPA must clarify that

such a source can remove the control device and does not need to keep it place merely to control emissions from a pneumatic pump.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 81.

Commenter Name: Mike Gibbons, Vice President – Production

Commenter Affiliation: CountryMark Energy Resources, LLC

Document Control Number: EPA-HQ-OAR-2010-0505-6241

Comment Excerpt Number: 24

Comment: We did not find a way to remove compliance equipment from our facilities. We believe that these requirements were omitted from the proposed regulation, but should be included in the final regulation.

After a well has operated for a certain period of time, gas production will no longer support the operation of either a separator or a combustor. At this point, owners/operators should be able to remove the equipment from the facility for use at another location. We recommend wells producing less than 25 MSCFD be able to replace a certified combustion device and separator with a non-certified combustion device or flare.

If EPA decides to use a system similar to OOOO, the method to remove tanks from the monitoring (i.e. the tank emissions are less than 4 tons per year for three consecutive years), we believe that the time period should be reduced from three years to three consecutive quarterly surveys.

Our experience from OOOO compliance is that if the initial emissions rate is greater than 6 tons per year for the first few months of operation then it falls to less than 4 tons per year. This results in supplemental propane being burned to maintain the pilot operation and supplemental combustion gas in the combustion device to meet 95% efficiency. Following this structure results in additional CO2 emissions because we are burning the additional propane for approximately two and a half years to meet EPA's time requirement.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 81.

5.6 Permitting Implications for Existing Control Devices

Commenter Name: Jim Welty

Commenter Affiliation: Marcellus Shale Coalition

Document Control Number: EPA-HQ-OAR-2010-0505-6803

Comment Excerpt Number: 10

Comment: We are also very concerned about the possibility of previously exempted tanks and closed vent systems being pulled in unintentionally simply by routing pump vapors to them. In the overwhelming majority of cases, the minute venting emissions from these pumps would be physically unable to enter the piping leading to the control device due to insufficient pressure. To facilitate control, operators would then need to reroute these emissions to the tanks. If those tanks and closed vent systems (CVS) were previously unaffected sources they would now be pulled in as a part of the control system for the pumps. We know this was an unintended consequence as U.S. EPA did not factor these very likely scenarios into the cost benefit analysis regarding pneumatic pumps. The only economic consideration was the cost of the tubing from the pump to the control device and the potential technical infeasibility of routing these emissions to certain existing control devices was not considered at all.

Response: We agree that the final rule should not affect the status of existing sources routed to existing control devices, nor is it the intent to pull these control devices into the compliance requirements for control devices under subpart OOOOa. The final rule has removed compliance requirements for control devices used to control pneumatic pump emissions. Because these control devices already existed on site and were installed for reasons other than controlling pneumatic pump emissions (e.g., under federal, state, or other requirements), we have determined that those control devices are already subject to compliance requirements under those pre-existing regulations and therefore we do not need to place new compliance requirements on those existing controls under subpart OOOOa. As a result, the final rule does not include new compliance requirements for existing control devices.

Commenter Name: J. Roger Kelley, Director, Regulatory Affairs

Commenter Affiliation: Continental Resources, Inc.

Document Control Number: EPA-HQ-OAR-2010-0505-6963

Comment Excerpt Number: 8

Comment: As troublesome as the aforementioned pneumatic pump issues may be, there are far more concerning consequences which will flow from EPA's poorly crafted pneumatic pump requirements. As is being commented on widely by industry trade groups and others, Section 60.5393a(b)(4) is particularly problematic. The vast majority of control devices which are currently used (in ancillary fashion) to control emissions from pneumatic pumps are primarily used to control tank flash vapors from storage tanks that are not OOOO or OOOOa affected facilities (either because of (1) installation date, (2) practically enforceable emission limits, or (3) uncontrolled PTE <6 tpy/tank/yr at time of first production); therefore, the closed vent systems and control devices are not subject to OOOO/OOOOa requirements. However, Section

60.5393a(b)(4) now seeks to subject a significant number of these existing closed vent systems and control devices to OOOO/OOOOa requirements.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6803, Excerpt 10.

Commenter Name: Laredo Petroleum

Commenter Affiliation: Laredo Petroleum

Document Control Number: EPA-HQ-OAR-2010-0505-6474

Comment Excerpt Number: 3

Comment: If a pneumatic pump is installed at a location with a control device and the pump is routed to the control device, does that new piping throw the facility into fugitive monitoring due to the additional piping (referenced on page 56614, column 1, under section 3. Modification of the Collection of Fugitive Emissions Components at Well Sites and Compressor Stations)?

Response: The addition of a closed vent system to address the requirements of a pneumatic pumps does not trigger a modification under the fugitive monitoring requirements. Please see the fugitive monitoring provisions of the final rule for more information on the modifications to a well site or compressor station that would trigger a modification.

Commenter Name: Howard J Feldman

Commenter Affiliation: American Petroleum Institute

Document Control Number: EPA-HQ-OAR-2010-0505-6884

Comment Excerpt Number: 74

Comment: EPA Did Not Consider How This Rule And Its Requirements To Route Pneumatic Pumps To Control Devices Can Potentially Trigger Permitting Requirements.

Under the proposed Subpart OOOOa, EPA is requiring that the exhaust from pneumatic pumps be controlled by control devices if those devices are present on site.

EPA's analysis of the proposed approach to pneumatic pumps has ignored the fact that such an action may require amending the air permit for a facility simply due to a replacement in kind of a pump under Subpart OOOOa. Many state new source review (NSR) programs require permits, simply because an NSPS or NESHAP requirement applies, even if a permit is not otherwise required. Additionally, the exact requirements will vary based on the local permitting requirements, but in many cases, the act of tying a new stream into a combustion control device will result in a change in emissions from a site due to the rerouting, which can trigger permitting. Local permitting requirements are very sensitive to the reality that control devices are subtle and complex engineering structures that have very real physical limits. As discussed above, EPA's proposal for natural gas pneumatic pumps under Subpart OOOOa seems to ignore these physical realities.

EPA has not accounted for any time or expense associated with this permitting action, nor have they considered any of the additional burden on permitting authorities. These impacts should be quantified and considered prior to finalizing Subpart OOOOa regulatory text that may trigger state permitting requirements. One alternative to this concern is to revise the affected source criteria so that a pneumatic pump would not be an affected source, if it was connected to a control device on site. This could be accomplished by revising the text of 60.5365(h)(2) as follows:

(2) For locations other than natural gas processing plants, each pneumatic pump affected facility, which is a single natural gas-driven chemical/methanol pump or natural gas-driven diaphragm pump ~~for which~~ has not been connected to a control device when one is located on site.

An additional advantage of this approach is that it clearly removes the addition of monitoring and performance testing currently in the proposed rule. As discussed in Sections 24.3.1 and 24.5.2, these costs were not included in EPA's cost effectiveness analysis, nor should compliance assurance requirements from OOOOa be required for a control device that was installed for another purpose.

Note that there are additional revisions to §60.5365a(h)(2) proposed in Sections 20.0, 24.4.1, and 24.4.5 to address separate applicability issues should EPA decide to regulate pumps as proposed.

Response: The commenter is correct that local permitting requirements can be sensitive to changes to the facility and that the addition of pneumatic pump emissions to an existing control device could trigger a permit modification, or at minimum a notification. However, for the final rule, the EPA considered additional costs (see response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 72) and section VI.D.6 of the preamble to the final rule), included additional engineering design and evaluation costs which would include any administrative burden associated with a permit modification related to complying with the federal rule for pneumatic pumps. We do not agree that the suggested revisions §60.5365a(h)(2) for this issue are warranted.

5.7 Availability of Electrical Power at Facilities Throughout Source Category

Commenter Name: Howard J Feldman

Commenter Affiliation: American Petroleum Institute

Document Control Number: EPA-HQ-OAR-2010-0505-6884

Comment Excerpt Number: 76

Comment: Electrical Power Is Not Available At Most Well Sites And Can Be Very Costly To Connect When It Is Available Nearby.

In the preamble, EPA requested comments on the availability of a constant, reliable source of electrical power at facilities throughout the oil and natural gas source category (FR 56625). “Electrical power” is typically taken as either grid power or locally-generated power. Generally, locally-generated power is solar power. These two power sources will be addressed separately.

Grid power is often not available in oil and natural gas producing sites due to their very remote nature. When grid power is available, it can be costly for oil and natural gas operators to establish a connection to the grid. Due to the significant cost associated with connecting to the grid, the payback on the capital costs of running grid power to well sites to replace a pneumatic pump with an electric pump is generally too long (often hundreds of years) to be considered. Further, API member company experience is that well sites often receive low priority behind others (hospitals, schools, residences, businesses, etc.) for connection services.

That said, when grid power is available, operators likely already utilize it to the extent possible for powering and monitoring of operations. If grid power were available, it would often be effective and efficient to electrify pumps rather than converting pneumatic pumps to instrument air. The use of electric motor driven pumps is a mature technology that is widely and typically used when reliable grid supply is available. Electric motor driven pumps also tend to be more reliable and more energy efficient than pneumatic driven pumps. Conversely, installing air compressors would be more expensive and less efficient. Instrument air systems are only economically feasible at sites where the pneumatic supply gas demand is sufficient to justify the capital and operating expense of an instrument-air compressor. At single well sites and even multi-well pads this is rarely the case, and the economics of electric pumps and controls are better than the economics of installing instrument air.

While the use of electric motor driven pumps is mature, the problem is that pumps tend to require a significant power load – a load that is far better suited to grid power than solar power. While solar pumps are sometimes an option, especially for low flow chemical injection pumps with low actuation frequency, as API pointed out in prior comments on the White Paper, there are limitations to their usage. For example, the White Paper noted that larger volume capacity solar operated pumps with high discharge pressures are available. This is not a valid conclusion from API’s experience or from the source cited by EPA (U.S. EPA, 2011b). Only the smallest of jobs requiring wellsite pumping are suitable for solar-powered pumps.

Response: We agree with the commenters that reliable electrical power is not regularly available to the affected facilities other than at natural gas processing plants. This is due to the remoteness

of the locations, the high cost to connect to an available grid, and that, particularly in remote locations, these locations would be low priority when competing demand was considered. We also agree that solar-powered pumps cannot always be used to address the load demand for these sites. Therefore, we have finalized the rule consistent with our analysis that reliable electric power is not regularly available for the pneumatic pump affected facilities other than at natural gas processing plants.

Commenter Name: Kathleen M. Sgamma, Vice President, Government and Public Affairs

Commenter Affiliation: Western Energy Alliance

Document Control Number: EPA-HQ-OAR-2010-0505-6930

Comment Excerpt Number: 50

Comment: The proposed rule requests comment on the availability of constant, reliable electrical power at oil and natural gas production facilities. *See* 80 Fed. Reg. at 56,625. Electrical “grid” power in the field is uncommon, but ultimately extremely variable from basin-to-basin. Take, for example, one member company’s feedback on the percentage of development with electricity by state: 50 percent in North Dakota, 0 percent in Louisiana, 0 percent in Wyoming and 30 percent in Utah. Further, the costs to electrify a field are substantial. One member company reports a \$15-20 million cost range for field-wide distribution in WY. A company with operations in ND reported an average cost of \$320,000 per mile of 25 kV distribution line.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 76.

Commenter Name: Steven A. Buffone

Commenter Affiliation: CONSOL Energy Inc.

Document Control Number: EPA-HQ-OAR-2010-0505-6859

Comment Excerpt Number: 22

Comment: EPA is taking comment on the availability of a constant, reliable source of electrical power at facilities throughout the oil and natural gas source category.

- CONSOL agrees that the constant supply of electrical power may not be available at all facilities throughout the oil and natural gas source category and that the option for gas driven pneumatic pumps is needed.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 76.

Commenter Name: Emily E. Krafjack

Commenter Affiliation: Connection for Oil, Gas and Environment in the Northern Tier, Inc., (C.O.G.E.N.T)

Document Control Number: EPA-HQ-OAR-2010-0505-6787

Comment Excerpt Number: 28

Comment: There are several electric powered compressor stations within our rural region, one along the transmission pipeline near Wyalusing, Bradford County and another along a gathering pipeline near Towanda, Bradford County. Another electric powered compressor station along a transmission pipeline has been proposed near Factoryville, Wyoming County. Operators are able to make arrangements to bring power in for these facilities. Further, as our Region expands with more large natural gas combined cycle power plants opportunities may be available for more electric powered compressor stations. Natural gas combined cycle power plants utilize turbines rather than engines. Turbines are much more efficient with consideration to fuel burned and pollutants emitted than compressor engines typically employed at gathering compressor stations. Opportunities for utilization of electric compressor engines may have a very beneficial result to our five county regional air quality.

Response: While we agree with the commenters that electrical power may be available at some locations other than natural gas processing plants, as noted above in the response to comment DCN EPA-HQ-OAR-2010-0505-7062, Excerpt 71, we do not have information or data in the record to determine that reliable and sufficient electric power needed for electric-based controls will be available to affected facilities at other than natural gas processing plants. We therefore cannot identify electric pumps as BSER for well sites in the production segment.

5.8 Glycol Pumps

Commenter Name: Darin Schroeder, David McCabe, Lesley Fleishman and Conrad Schneider

Commenter Affiliation: Clean Air Task Force et al.

Document Control Number: EPA-HQ-OAR-2010-0505-7062

Comment Excerpt Number: 72

Comment: Glycol assist pumps, referred to as “Kimray Pumps” in the GHG Inventory, are estimated to emit 184,773 metric tons of natural gas per year. While control of emissions from these pumps is more complex than control of emissions from chemical injection pumps (because the natural gas used to drive the pump is emitted via the dehydrator vent stack), there are a number of options to reduce emissions from these pumps. As EPA notes, electrification is an option for these pumps. A secondary option is the use of a low pressure glycol separator, which can separate methane-rich gas from the glycol before it enters the regenerator. If this is done, the gas can be used to fuel the boiler on the regenerator or otherwise consumed for fuel on-site.

For gas processing plants and sites where electricity is present, EPA should require that new and modified glycol circulation pumps not emit any natural gas, since electric pumps are available for this purpose. EPA should consider requiring the use of low pressure glycol separators at other sites, since the methane separated from the glycol in this way can typically be directed to the boiler or the regenerator. It is important to consider that some natural gas dehydrators have emissions controls installed that control emissions of VOC, but do not control emissions of methane. If vented natural gas from a glycol circulation pump is routed into a glycol regenerator, the methane from the natural gas may be emitted to the atmosphere even if there are VOC controls on the dehydrator.

Response: As noted in proposal, it is also our understanding that replacing the natural gas in gas-assisted lean glycol pumps with instrument air is not feasible and would create significant safety concerns. However, we also note that solar and battery systems large enough to power these types of pumps may be technically infeasible. We solicited comment on the level of uncontrolled emissions from lean glycol circulation pumps and received no compelling information or data that indicates that there are significant uncontrolled emissions not already addressed by existing rules. Therefore, we have not included these pumps in the pneumatic pumps affected facility definition in the final rule.

Commenter Name: Howard J Feldman

Commenter Affiliation: American Petroleum Institute

Document Control Number: EPA-HQ-OAR-2010-0505-6884

Comment Excerpt Number: 77

Comment: Glycol Dehydrator Circulation Pump Emissions Vary, But Are Limited By Other Existing Regulations.

In the preamble, EPA requested comments and additional information on the level of uncontrolled emissions from glycol dehydrator lean-glycol circulation pumps, how they are vented through the dehydration system, and the amount and characteristics of VOC and methane emissions from uncontrolled glycol dehydrators. (FR 56627).

API believes that the dehydrator units with the highest potential VOC and methane emissions are already being controlled as a result of 40 CFR 63 Subparts HH and HHH either to meet the MACT control requirements or to take an enforceable limit on benzene emissions for the less than 1 TPY benzene applicability exemption. The use of combustion devices to control HAP emissions from dehydrator units also reduces VOC and methane emissions.

24.4.3 The Rule Text Should Be Clearer On Exclusion Of Lean Glycol Circulation Pumps (Often Referred To As Kimray Pumps) On Dehydration Units (As Intended By The Preamble Language).

EPA's intent is clear in the Preamble (FR 56627) that EPA is not proposing to regulate gas assist lean glycol circulation pumps on glycol dehydration units. However, the regulatory text does not make this exclusion clear.

EPA can improve this by having a single modified definition under §60.5430a rather than two inconsistent definitions for chemical/methanol or diaphragm pumps and natural gas-driven chemical/methanol or diaphragm pumps. Neither defined term is used in the rule text itself which is also confusing.

API proposes an updated definition under §60.5430a as follows:

Remove the following definition:

~~“Chemical/methanol or diaphragm pump means a gas-driven positive displacement pump typically used to inject precise amounts of chemicals into process streams or circulate glycol compounds for freeze protection.”~~

API recommends adding following definition:

Natural gas-driven chemical/methanol or diaphragm pump means a natural gas-driven positive displacement pump used to inject chemicals into process streams or circulate glycol compounds for freeze protection. A lean glycol circulation pump on a glycol dehydration unit is not a chemical/methanol or diaphragm pump. A temporary or portable pump is considered a stationary source under this rule if the pump stays in one location for more than 12 months (or full annual operating period of a seasonal source).

Response: The final rule clarifies that lean glycol circulation pumps are not pneumatic pump affected facilities. We have revised the definitions of a natural gas-driven diaphragm pump to mean a diaphragm pump powered by pressurized natural gas. A lean glycol circulation pump that relies on energy exchange with the rich glycol from the contactor is not considered a diaphragm pump. Further, the affected facility definition has been revised such that any diaphragm pump

that is used less than 90 days per calendar year is not considered an affected facility under the final rule. See section VIII.E.5 of the preamble to the final rule for more detail regarding lean glycol circulation pumps and section VI.D.7 for more detail on the revised affected facility definition.

Commenter Name: Thure Cannon, President

Commenter Affiliation: Texas Pipeline Association (TPA)

Document Control Number: EPA-HQ-OAR-2010-0505-6927

Comment Excerpt Number: 32

Comment: Finally, we request clarification that Kimray glycol pumps - *i.e.*, pumps that need no supply gas - would not be subject to the OOOOa requirements for pneumatic pumps. EPA has proposed that "pneumatic pump affected facility" be defined in 40 CFR § 60.5365a(h) to include only a "single natural gas driven chemical/methanol pump or natural gas-driven diaphragm pump"; as a result, EPA states that "pumps which are driven by means other than natural gas would not be affected facilities subject to the pneumatic pump provisions of the proposed NSPS." This should mean that the Kimray glycol pumps that are described above are not covered by the pneumatic pump requirements in Subpart OOOOa, but due to the prevalence of such pumps in the natural gas industry, it would be helpful if EPA made this clear.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 77.

Commenter Name: Cory Pomeroy, General Counsel

Commenter Affiliation: Texas Oil & Gas Association

Document Control Number: EPA-HQ-OAR-2010-0505-7058

Comment Excerpt Number: 77

Comment: EPA is requesting comment and additional information on the level of uncontrolled emissions from glycol pumps, how these pumps are vented through the dehydrator system, and the amount and characteristics of VOC and methane emissions from uncontrolled glycol dehydrators.

Our understanding is that emissions from glycol dehydrator pumps are not separately quantified because these emissions are released from the same stack as the rest of the emissions from the dehydrator system, which are regulated under the NESHAP at 40 CFR part 63 HH and HHH.

"Gas assisted" or "energy exchange" pumps are a cost-effective and proven technology widely used by the industry for remote locations where there is no power available. Through EPA's Natural Gas STAR program and other published studies it is well understood that gas (methane) entrained in the rich glycol is released in the rich glycol separator, if present, or in the glycol regeneration process via the reboiler. For glycol dehydration units that are uncontrolled, methane

may be emitted to the atmosphere either from the rich glycol separator vent, if present and when the relief pressure setting is exceeded and/or from the reboiler still vent.

Emissions from “gas assisted” or “energy exchange” pumps are vented through glycol dehydration units and not directly to atmosphere. Such emissions are controlled for affected glycol dehydration units located at area and major sources under 40 C.F.R. Part 63 Subpart HH—NESHAP from Oil and Natural Gas Production Facilities.

Emissions from glycol pumps are already regulated via regulation of glycol dehydration unit process vents by federal NESHAP standards and many state/local standards and regulations.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 77.

Commenter Name: Rodney Sartor

Commenter Affiliation: Enterprise Products Partners L.P.

Document Control Number: EPA-HQ-OAR-2010-0505-6807

Comment Excerpt Number: 11

Comment: The proposed NSPS contains new requirements for gathering and boosting stations, natural gas processing plants and the transmission and storage sector related to pneumatic pumps. We have a number of facilities that currently operate pneumatic pumps using compressed air and those would not be considered an “affected facility” under the rule. We ask that EPA clarify the language in the regulatory text to make clear that Kimray Energy Exchange Pumps should be specifically excluded from the definition of a “pneumatic pump affected facility” under the proposed NSPS. While the preamble to the NSPS indicates that EPA is not proposing to regulate glycol dehydrator pumps such as these, the regulatory text could lead to potential confusion on this point.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 77.

5.9 Other Comments Regarding Pneumatic Pumps

Commenter Name: Gary Buchler

Commenter Affiliation: Kinder Morgan, Inc.

Document Control Number: EPA-HQ-OAR-2010-0505-6857

Comment Excerpt Number: 70

Comment: EPA proposes to define a “pneumatic pump” affected facility for locations other than natural gas processing plants as follows:

For locations other than natural gas processing plants, each pneumatic pump affected facility, which is a single natural gas-driven chemical/methanol pump or natural gas-driven diaphragm pump for which a control device is located on site.

Kinder Morgan takes issue with this definition for two reasons. In Section 60.5393a(b)(2), EPA states “[y]ou are not required to install a control device solely for purposes of complying with the 95 percent reduction of paragraph b(1) of this section. If you do not have a control device installed on-site by the compliance date, then you must comply instead with the provisions of paragraph (b)(2)(i) and b(2)(ii) of this section.” EPA proceeds then to require submission of a certification and subsequent compliance with the 95 percent reduction requirement if a control device is later installed on site. *Id.* Thus, EPA’s requirements seek to regulate pumps (at locations other than natural gas processing plants) for which a control device is not located on-site by the compliance date even though the definition of affected facility appears to exclude such pumps. Thus, EPA’s definition of a “pneumatic pump” affected facility creates internal conflict within the proposed NSPS OOOOa, and would undoubtedly create significant confusion upon implementation—if adopted as written.

Second, EPA must clarify this affected facility definition such that qualifying as a pneumatic pump affected facility is contingent on the presence of a control device on-site and such control device must already be subject to 40 C.F.R. § 60.18 or 63.11, which governs general control device and work practice requirements under all NSPS Subpart programs. Without this clarification, the Proposed NSPS OOOOa could inappropriately make control devices subject to the rules outlined in 40 C.F.R. § 60.18 or 63.11 which could essentially require the installation of a new control or expensive modifications to the existing control. In either event, EPA did not consider these costs in its analysis.

To address Kinder Morgan’s two primary concerns with EPA’s proposed definition of “pneumatic pump” affected facility, Kinder Morgan proposes the following rule language:

For locations other than natural gas processing plants, each pneumatic pump affected facility, which is a single natural gas-driven chemical/methanol pump or natural gas-driven diaphragm pump for which a control device **is already subject to 40 C.F.R. § 60.18 or 40 C.F.R. § 63.11 and** is located on site.

Response: Commenters present a host of concerns with the pneumatic pump provisions in the proposed rule, including the definition of affected facility, the interpretation of what constitutes a

control device under these requirements and compliance requirements for control devices used to control pump emissions. Because commenter's issues are interrelated, and because significant revisions to the final rule have been made, the response to these comments is combined here for ease of presentation and understanding.

First, commenters noted that the affected facility definition as proposed exempted any pumps for which there was no control device on site. Commenters assert, however, that other provisions pulled those pumps into applicability if a control device was subsequently added to the site. One commenter interpreted the affected facility was only pneumatic pumps that were already controlled, and therefore the rule created no new affected facilities.

Many commenters requested either a definition of control device under these provisions or, at minimum, clarification of what constitutes a control device that would trigger pneumatic pump applicability. As noted above, the affected facility definition now states that all pneumatic diaphragm pumps at well sites and natural gas processing plants are affected facilities. Several commenters suggested that only control devices that are currently subject to subpart OOOO or OOOOa (other sources subject to OOOO or OOOOa being located onsite) should trigger applicability for pneumatic pump requirements.

After review of the pump provisions, we have revised the pneumatic pump affected facility definition to state that a pneumatic pump is an affected facility even if no control device is available on site.

The EPA has also revised the final rule to clarify that any control device or process that is available on site must be used to control pump emissions whether or not the control device or process can meet a 95 percent emission reduction. The pneumatic pump must be connected to any existing control device or process on site, unless it is technically infeasible to do so, due to pressure differential or other technical reasons including control device capacity. See the section VI.D.3 of the preamble to the final rule for discussion of the addition of the technical infeasibility exemption.

Based on these changes, we are not providing a definition of control device because we do not want to limit the type of control device or process that can be used. For the same reason, we do not exempt process heaters, boilers, and other types of equipment from being used for control of pump emissions. Further, because our intent is to use any control device or process that is available on site, regardless of control efficiency, it is not necessary to limit the control devices to OOOO or OOOOa subject control devices.

The EPA has determined BSER for control of pneumatic pump affected facilities at well sites to be routing emissions to an existing control device or process available on site which establishes a standard for emissions of 95 percent control. The final rule clarifies that the owner or operator must route emissions to a control device or process that achieves 95 percent emission reductions if one is available. If a control device that achieves 95 percent is not available, the rule requires that the owner/operator must still route to that existing control device even if it meets less than 95 percent efficiency. Further, the final rule does not impose any compliance requirements on

existing control devices (also see the response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 37).

Commenter Name: J. Roger Kelley, Director, Regulatory Affairs

Commenter Affiliation: Continental Resources, Inc.

Document Control Number: EPA-HQ-OAR-2010-0505-6963

Comment Excerpt Number: 5

Comment: First, there are numerous contradictions and inconsistencies in OOOOa's requirements. Perhaps the greatest example is the proposed regulation of pneumatic pumps. Section 60.5360a defines a pneumatic pump — at locations other than natural gas processing plants — as "...a single natural gas-driven chemical/methanol pump or natural gas driven diaphragm pump for which a control device is located on site." Therefore, it is logical to conclude OOOOa creates no new pneumatic pump affected facilities except those whose emissions are currently controlled. However, Section 60.5393a(b) is worded such that all pneumatic pumps at production facilities are affected facilities under OOOOa, including (1) production facilities with a control device capturing emissions from processes other than the pneumatic pump and (2) production facilities with no control device.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 70.

Commenter Name: Howard J Feldman

Commenter Affiliation: American Petroleum Institute

Document Control Number: EPA-HQ-OAR-2010-0505-6884

Comment Excerpt Number: 82

Comment: EPA Must Define "Control Device" In The Context Of Its Use In The Requirements For Pneumatic Pumps

§60.5365a(h)(2) states:

(2) For locations other than natural gas processing plants, each pneumatic pump affected facility, which is a single natural gas-driven chemical/methanol pump or natural gas-driven diaphragm pump for which a control device is located on site.

Control device is not a defined term and should be specifically defined to clarify EPA's intent which, from review of the complete NSPS OOOOa proposal and TSD, appears to be to utilize combustion control devices and/or VRUs if available. This issue is discussed in Section 13.0, and a definition recommended that will eliminate the issues related to the uncertainty of when the pneumatic pump requirements apply.

However, if EPA does not elect to incorporate API's suggested changes in Section 13.0, then EPA must make revisions within §60.5365a(h)(2) to clarify this situation. Specifically, API recommends the following change:

§60.5365a(h)(2) *For locations other than natural gas processing plants, each pneumatic pump affected facility, which is a single natural gas-driven chemical/methanol pump or natural gas-driven diaphragm pump for which a control device is located on site.*

For the purpose of this section, boilers, process heaters, and other combustion devices that burn natural gas to derive useful work or heat are not considered control devices.

Note that there are additional revisions to §60.5365a(h)(2) proposed in Section 20 and 24.4.1.

Combining the edits in Sections 20, Section 24.4.1, and this Section results in:

§60.5365a(h)(2) *For locations other than natural gas processing plants, each pneumatic pump affected facility, which is a single natural gas-driven chemical/methanol pump or a natural gas-driven diaphragm pump that meets the criteria in paragraphs (i) through (iii) and is not excluded by (iv).*

(i) The pump has an exhaust rate greater than 53,000 scf/yr and operates more than 2,160 hours per year.

(ii) The pump has a control device owned and operated by the owner and operator of the pump is located on site. For the purpose of this section, boilers, process heaters, and other combustion devices that burn natural gas to derive useful work or heat are not considered control devices.

(iii) The pump has not been demonstrated to be technically infeasible to control.

(iv) A pneumatic pump that is in compliance with a legally and practically enforceable requirement that requires the reduction of VOC or methane is not an affected facility.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 70.

Commenter Name: Thure Cannon, President

Commenter Affiliation: Texas Pipeline Association (TPA)

Document Control Number: EPA-HQ-OAR-2010-0505-6927

Comment Excerpt Number: 29

Comment: At a minimum, EPA should rewrite and clarify its proposed rule language for pneumatic pumps. For example, under the proposed rule the presence or absence of a "control device" would mean the difference between having to control at 95 percent vs. not having to control. As such, it is very important that EPA make clear to owners and operators what sort of device constitutes a "control device" under the pneumatic pump rules. As it currently stands,

however, EPA's proposed rule falls short. Indeed, the proposed rule language is entirely unclear as to what sort of equipment constitutes a "control device" that would trigger application of the 95 percent control requirement. While some equipment (*e.g.* a flare) is clearly understood to constitute a control device, other equipment is not so clearly categorized as a control device. Equipment that could raise issues in this regard would include burners on dehydration units, boilers or process heaters, and carbon canister systems. If the current rule language is finalized, owners and operators having this equipment on-site would be left with unanswered questions - with serious compliance consequences - as to whether or not a "control device" is on-site such that they would be required to route pump emissions to these devices under Subpart OOOOa. Accordingly, EPA should add clarity in its final rules as to what does, and does not constitute a "control device" that would trigger the 95 percent control requirement for pneumatic pumps.

In making this clarification, EPA should provide that the 95 percent control requirement would not be triggered by the presence of *any* piece of equipment that might be considered to be a "control device." Rather, EPA should restrict the definition so that the 95 percent control requirement would only be triggered if the on-site emissions control device is one that is present at the facility because it is required by Subpart OOOO or Subpart OOOOa. If EPA does not include such a restriction, then owners and operators could be subject to the 95 percent control requirement even though they do not have any on-site control device capable of meeting that standard. This is because many control devices are present on-site at facilities in order to meet permit limits or state standards -which may require less than 95 percent control. Under EPA's current proposal, the owner or operator would be required to meet a 95 percent control requirement if any "control device" was present on-site - even where utilization of the on-site control device would not result in the achievement of the requisite level of control. This, in turn, would force the owner or operator to install a new control device or to add equipment to the currently present device, each of which could entail substantial, unreasonably high expense -not to mention the additional expense that would result from the construction of piping from the pump to the control device. This could be avoided by limiting application of the 95 percent control requirement to situations where control devices required by Subpart OOOO are already on-site. EPA's description of the 95 percent control requirement in the TSD indicates that application of the requirement assumes the availability of an existing control device that is "capable of at least 95 percent reduction in emissions" If a control device is not capable of 95 percent reduction, then its presence on-site should not trigger the 95 percent control requirement.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 70.

Commenter Name: Cory Pomeroy, General Counsel

Commenter Affiliation: Texas Oil & Gas Association

Document Control Number: EPA-HQ-OAR-2010-0505-7058

Comment Excerpt Number: 75

Comment: TXOGA supports EPA's proposal providing that owners and operators are not required to install a control device solely for the purposes of complying with the standard for pneumatic pumps. EPA should, however, require that emissions from certain affected pneumatic

pumps be routed to a control device only if such control device is located within the boundary of the surface site and under the control of the operator and only if such control device is required by NSPS OOOO/OOOOa for a storage vessel affected facility or other affected source. Controls should not be required for pneumatic pump affected facilities operated at a site with no other sources affected by NSPS OOOO/OOOOa. At a minimum, EPA should limit compliance requirements pursuant to the pneumatic pump standards for those control devices not already required for an affected facility other than pneumatic pumps. In addition, EPA should exclude certain pneumatic pumps from regulation, including small or limited use pumps and pumps for which controls would not be technically feasible.

The proposed standards would require the methane and VOC emissions from new, modified and reconstructed natural gas-driven chemical/methanol pumps and diaphragm pumps located at any location (except for natural gas processing plants) throughout the source category to be reduced by 95 percent if a control device is already available on site. Owners and operators are not required to install a control device solely for the purposes of complying with the 95.0 percent reduction standard. The proposal results in an overlap of requirements for control devices not already regulated by Subpart OOOO or OOOOa and those control devices otherwise required by the rule for an affected facility other than pneumatic pumps. The former should not be subject to standards for closed vent systems and control devices, nor to requirements for inspections, monitoring, recordkeeping or reporting. In fact, as noted above, EPA should limit applicability of the control standard for pneumatic pumps only to those sites where an NSPS OOOO/OOOOa control device is in operation.

For cases where a control device previously required for an affected facility other than a pneumatic pump is no longer required by Subparts OOOO/OOOOa for any reason, EPA should clarify that such control device would also no longer be required for any pneumatic pump affected facility.

Response: See responses to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 70, and DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 75. Please also see section VIII.E.2 of the preamble to the final rule, regarding the removal of a control device from the site.

Commenter Name: Matthew Hite

Commenter Affiliation: Gas Processors Association (GPA)

Document Control Number: EPA-HQ-OAR-2010-0505-6881

Comment Excerpt Number: 27

Comment: EPA Must Clarify That Only “Control Devices” That Are Required for Another Subpart OOOO or OOOOa Affected Facility Should be Considered for Applicability

EPA’s proposed rule creates uncertainty by failing to describe the type of “control devices” that can trigger NSPS applicability for pneumatic pumps. While GPA agrees with EPA that NSPS requirements should not be triggered for pneumatic pumps in the absence of an existing control device, it is unclear which types of control devices could trigger applicability. GPA urges EPA to

clarify that only control devices required for another Subpart OOOO or OOOOa-affected facility should trigger applicability criteria here. Broadening the scope of a control device beyond the regulated source category it was installed to control raises both technical and legal concerns.

EPA defines a pneumatic pump affected facility at a location other than natural gas processing plant as, “a single natural gas-driven chemical/methanol pump or natural gas-driven diaphragm pump for which a control device is located on site.” Proposed 40 C.F.R. § 60.5365a(h)(2). However, EPA does not define the term “control device” in 40 C.F.R. §§ 60.5420 or 60.2, so it is unclear from the proposal which type of equipment triggers pneumatic pump applicability. Because installation of a “control device” would require compliance with all the OOOOa control device requirements, the most logical reading suggests that EPA intends that the “triggering” control device is one that is required for compliance with OOOO or OOOOa for another affected facility type (e.g., a storage vessel). In other words, operators may install a piece of equipment onsite that is used to control emissions, but is not used to control emissions for Subpart OOOO or OOOOa, without triggering NSPS applicability for pneumatic pumps. GPA requests that EPA clarify in the final rule that pneumatic pumps will only become subject to NSPS if an existing control device was installed for the purpose of complying with Subpart OOOO or OOOOa. We propose the following language for 40 C.F.R. § 60.5420(h)(2):

*For locations other than natural gas processing plants, each pneumatic pump affected facility, which is a single natural gas-driven chemical/methanol pump or natural gas-driven diaphragm pump for which a control device **that is being used to comply with Subpart OOOO or OOOOa for another affected facility is located on site.***

Alternatively, EPA could define “control device” in 40 C.F.R. § 60.5430a as follows:

Control device means a device being used to control emissions for compliance with Subpart OOOO or OOOOa.

Expanding the definition of source category beyond Subpart OOOO and OOOOa control devices raises both technical and legal challenges. First, from a technical standpoint, it is not clear whether devices designed for other purposes beyond Subpart OOOO or OOOOa compliance will be able to achieve the emissions reductions required in 40 C.F.R. § 60.5393a(b)(2). Such control devices may be fully subscribed addressing emissions from other sources and may lack the excess capacity to incorporate emissions from pneumatic pumps. Further, such control devices may not be designed to meet the 95% emission reduction target that EPA has established for pneumatic pumps. As a result, even if the control device has excess capacity and can accommodate emissions from a pneumatic pump, it may not be equipped to produce a 95% reduction in methane and VOC emissions. Specifically, GPA urges EPA to clarify that other equipment that can be used to reduce emissions and/or may be considered “control devices” such as condensers, boilers, reboilers, heaters, and catalytic converters on engines be specifically exempted for the purpose of subjecting pneumatic pumps to the rule. They are not suitable control devices for pneumatic pumps and were not designed for the purpose of meeting 95% reductions of VOC or methane from vent streams from other sources.

Further, as a legal matter, EPA cannot use this rulemaking to impose new obligations on control devices installed for compliance with another regulatory program. The plain and unambiguous language of Section 111(b) requires EPA to take a source-specific approach when conducting Best System of Emissions Reduction (“BSER”) analyses and establishing standards of performance. See 42 U.S.C. § 7411(b)(1)(B) (directing EPA to establish “Federal standards of performance for new sources within such source category” after making an appropriate endangerment determination). Because NSPS are source-based regulations, EPA cannot use the proposed Subpart OOOOa regulations to impose new obligations on sources or control devices from other NSPS source categories. *Asarco v. EPA*, 578 F.2d 319, 323 (D.C. Cir. 1978) (“Affected facilities, and thus new sources, [are] clearly not synonymous with entire plants.”); *Alabama Power Co v. Costle*, 636 F.2d 323, 397 (D.C. Cir. 1979) (“EPA cannot treat continuous and commonly owned units as a single source unless they fit within the four permissible statutory terms.”). But that is exactly what EPA would be doing if it were to impose new requirements on control devices that were installed to comply with other regulatory provisions. To avoid any confusion or potential legal issues based on the regulation of control devices subject to other regulatory provisions, EPA must clarify that 40 C.F.R. § 60.5420(h)(2) only includes control devices installed to comply with the requirements of Subpart OOOO or OOOOa.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 70.

Commenter Name: Clement J. Frost, Chairman
Commenter Affiliation: Southern Ute Indian Tribe Council
Document Control Number: EPA-HQ-OAR-2010-0505-6446
Comment Excerpt Number: 6

Comment: The Tribe recommends that EPA include the term "suitable" in reference to the proposed control device for pneumatic pumps in the regulations (i.e., §§60.5365a(h)(2) & 60.5393a(b)(2)). EPA is proposing emission controls for pneumatic pumps where there is an existing control device that is capable of achieving 95 percent reduction of VOC and methane emissions from the pump. The Tribe recommends that EPA include the term "suitable" in reference to the control device in the regulations. There are instances where a control device may be operating onsite, however to get the emissions from the pneumatic pump to the control device would require compression of the emissions to a higher pressure so that they could enter the control device. In such cases, the addition of a compressor to move the pump vented emissions may negate any emission reductions from the controls. A definition of "suitable control device" with regard to pneumatic pumps should be included in the regulations. The following is a suggested definition of "suitable control device":

A suitable control device, in reference to control devices already available on site for use with a pneumatic pump means, a control device that is capable of achieving 95 percent reduction of VOC and methane emissions and is capable of accepting pneumatic pump vented emissions (i.e., without additional compression), as currently designed.

Response: Commenter suggests language to clarify potential confusion on which control devices trigger applicability for pneumatic pumps. We do not agree that using "suitable" is the most effective way to clarify the final rule. As noted in the response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 70, the EPA made several changes to the rule to address these issues.

Commenter Name: Howard J Feldman

Commenter Affiliation: American Petroleum Institute

Document Control Number: EPA-HQ-OAR-2010-0505-6884

Comment Excerpt Number: 84

Comment: Clarification is Needed When a Pneumatic Pump Must be Connected to a CVS/Control Device

There is significant uncertainty on when a pneumatic pump must be connected to a control device. Control device is an undefined term and defining it is a necessary first step to resolve this issue (see Sections 13.0). Another great source of uncertainty is when a boiler or process heater is considered a control device and when it is part of a process (see Section 13.0). API believes that pneumatic pumps should not be required to be routed to a boiler or heater.

24.4.7 Heaters Should Not Be Considered As Existing Control Devices – I.E. Pneumatic Pump Exhaust Should Not Be Required To Be Routed To A Heater Simply Because One Is Present.

The language in §60.5412a describes requirements that each control device must meet and this list includes process heaters. This language could be misinterpreted to mean that any process heater should be considered a control device and thus, its presence would require routing of a pump exhaust to the heater. It is not believed that this was EPA's intent.

EPA should clarify that routing emissions to a process heater should be considered "routing to a process" and the heater should not be considered as a control device. More discussion on this topic is provided in section 13.0. However, if EPA does not elect to incorporate API's suggested changes in section 13.0, then EPA must make revisions in §60.5365a(h)(2) to clarify this situation. The recommended changes are shown above in section 24.4.5.

See Section 13.0 of these comments for a complete discussion of the issues associated with treatment of heaters and boilers in Subpart OOOOa.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 70.

Commenter Name: Lee Fuller, Executive Vice President, and V. Bruce Thompson, President

Commenter Affiliation: Independent Petroleum Association of America (IPAA) and the American Exploration and Production Council (AXPC)

Document Control Number: EPA-HQ-OAR-2010-0505-6983

Comment Excerpt Number: 49

Comment: If EPA persists with its proposed controls on pneumatic pumps, it should clarify the definition of an “affected facility” and the interplay with reporting requirements. “Affected facility” should mean only new or modified continuous high-bleed pumps and specifically exclude low-bleed pumps (< 6 scfh). Since low-bleed pumps would not be considered an “affected facility,” it is assumed they would not be subject to the reporting requirements for high-bleed pneumatic pumps. IPAA/AXPC requests confirmation of its reading of the reporting requirements. The applicability of EPA’s proposed regulations turns on whether a control device is already present at the site. EPA’s regulations and preamble are silent as to whether the existing control device is already subject to NSPS and therefore an affected facility. To the extent the existing combustion device is not an affected facility, Subpart OOOOa should be clarified that existing, non-affected facility combustion devices should not become subject to NSPS simply because a new pneumatic pump is installed or an existing pump is modified. If EPA intends to pull in the existing control device and make it an affected facility, EPA must revise its cost effectiveness analysis to account for the additional costs associated with “converting” the existing control device to an affected facility.

Response: See section VI.D.7 of the preamble to the final rule for a discussion of the revisions to the affected facility definition. See section VI.D.1 of the preamble to the final rule for a discussion of the exclusion of piston pumps. With respect to the commenter’s concern regarding control devices, the EPA has revised the final rule to state that any existing control device or process available on site must be used to control pump emissions. The rule imposes no requirements on the control device, therefore, the EPA’s cost effectiveness analysis is correct.

Commenter Name: Howard J Feldman

Commenter Affiliation: American Petroleum Institute

Document Control Number: EPA-HQ-OAR-2010-0505-6884

Comment Excerpt Number: 83

Comment: Further, the control device and the pneumatic pump may be owned/operated by two different companies (i.e. chemical injection for gathering system corrosion control at a well site). In this case, even though a control device is at the location, it is not available to the owner/operator of the pneumatic pump (see Section 24.4.5).

The Control Device Must Be Owned And Operated By The Pump Owner And Operator

EPA must be clear that a control device on site must be owned and operated by the same company that owns and operates the pumps. For instance, the dehydration unit located on a production site may be owned and operated by the gathering company, not the producer. If there is a dehydration unit on site with a control device that is owned and operated by the gathering company, the producer has no right to route pump exhaust to the control device and should not

be required to route the pump exhaust to the dehydration control device owned and operated by a separate entity.

Response: There is no evidence in the record to indicate that this is common occurrence and therefore we are not including this kind of clarifying language in the final rule.

Commenter Name: Thure Cannon, President

Commenter Affiliation: Texas Pipeline Association (TPA)

Document Control Number: EPA-HQ-OAR-2010-0505-6927

Comment Excerpt Number: 30

Comment: In addition, the 95 percent control requirement should not be triggered by the presence of an on-site control device that is owned and operated by a different company than the one that owns and operates the pneumatic pump. In such a situation, pump emissions may not be able to be routed to the control device for the simple reason that the control device owner may refuse to allow emissions to be routed to the device, where such emissions come from a pump owned by a different company. If the on-site control device is not available to be used to control emissions from the pump, then triggering the 95 percent control requirement -based on the presence of an on-site but unavailable control device - would obviously be inappropriate. The rule requires 95 percent control when a control device is on-site because EPA assessed the cost of routing emissions to an existing device and found those costs to be reasonable, as opposed to the unreasonable costs of installing a new control device. Such a cost assessment is clearly based on the assumption that the on-site control device is actually available for use in controlling pump emissions, which would not be the case if the pump was owned by a different company that the control device.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 83.

Commenter Name: Howard J Feldman

Commenter Affiliation: American Petroleum Institute

Document Control Number: EPA-HQ-OAR-2010-0505-6884

Comment Excerpt Number: 37

Comment: The Proposed Compliance Assurance Requirements For Pneumatic Pumps Are Filled With Problems

There are many issues with the proposed compliance assurance provisions for pneumatic pumps. Following are three major issues associated with the compliance assurance requirements. These are discussed at length in Section 24.0.

Compliance Assurance Requirements of an Existing CVS/Control Device Should Not Change

EPA determined that the benefit of controlling the discharge of a pneumatic pump was insufficient to justify the installation of a control device, thus the requirement to only connect new pneumatic pumps to existing CVS/control device. Further, EPA only considered the cost of piping the pump discharge to the CVS but did not include costs for additional compliance assurance (see Section 22.2.1 – 24.3.1). Most control devices are expected to be installed due to state minor source NSR permits. These permits have their own compliance assurance requirements which are significantly different than those for OOOOa centrifugal compressors, resulting in significant additional cost. These additional costs have not been included in EPA's cost/benefit analysis, cannot be justified with the low emission reduction benefits achieved, and do not provide additional environmental benefit. Thus, API recommends that EPA not any require additional compliance assurance requirements in OOOOa be applied for a CVS or control device when a pneumatic pump is connected to it (see Section 24.2).

Pneumatic Pumps Are Located Near Storage Vessels, Not Centrifugal Compressors As stated above, EPA believed that few centrifugal compressors were expected to require control, and these few are mainly expected to be at natural gas processing plants. Therefore, EPA proposed that pneumatic pumps at natural gas processing plants must have no natural gas emissions, thus tying centrifugal compressor compliance assurance requirements to pneumatic pumps is not logical. However, pneumatic pumps are most often located at well sites and small compressor stations that are more likely to have controls devices installed to control emissions from storage vessels. Well sites do not have the communications infrastructure that would be required to be installed under the centrifugal compressor compliance assurance requirements (see §60.5417a(a)) making these additional requirements an even greater burden. As noted above, API believes that no additional compliance assurance requirements should be added beyond what are already required for the existing control device. However, if EPA decides to add new compliance assurance requirements when a new pneumatic pump is connected to an existing control device, it should be the storage vessel compliance assurance requirements, not those for centrifugal compressors.

Additionally, EPA has proposed overly burdensome and costly testing and monitoring requirements for control systems used to control pumps. If control requirements are retained for any types of pneumatic pumps, the rule should eliminate testing, monitoring, and recordkeeping requirements for the control device that are triggered solely due to the connection of a pneumatic pump exhaust to the closed vent system or control device. Alternatively, EPA should only require control of pumps when an existing Subpart OOOO/OOOOa control device which is already subject to the same requirements as in the proposed rule is present.

Control Device And Closed Vent System Requirements

As written, control devices not subject to Subpart OOOO or OOOOa would be required to be used to control emissions from pneumatic pumps. It is not clear if this was EPA's intent in writing the rule. From the lack of consideration for performance requirements, performance testing, closed vent system monitoring, recordkeeping, and reporting compliance costs in the economic analysis, it appears that EPA did not intend for control devices not subject to Subpart OOOO of OOOOa to be pulled into the monitoring, reporting, and recordkeeping requirements under Subpart OOOOa. If EPA maintains a requirement to route higher emitting pneumatic

pumps to existing control devices, this should not trigger the performance specifications, performance testing, monitoring, closed vent system monitoring, recordkeeping, and reporting requirements for the control device if it is not already subject to regulation under Subpart OOOO. This change from the proposed approach would address one of the two critical cost elements ignored by EPA when assessing the cost of control; specifically, the costs of testing, monitoring, reporting, and recordkeeping requirements.

By requiring existing closed vent systems and control devices to comply with the specified requirements listed in §60.5410a, §60.5411a, §60.5412a, §60.5413a, §60.5415a, §60.5416a, and §60.5417a the proposed rule retroactively applies unnecessary, burdensome, and costly requirements to existing control devices and systems that were not designed, installed, or intended to comply with these requirements. Note also that none of the additional costs are included in EPA's analysis of the reasonableness of controlling pneumatic pump affected sources and the additional costs are likely to render such control not reasonable -cost analysis details are presented in a separate section of these comments.

- ❑ §60.5411a & §60.5416a: An existing closed vent system may not be designed or constructed to meet the standard of “no detectable emissions” specified in §60.5411a and detailed in §60.5416a. Again, this may force retrofit or replacement of the existing piping system to enable meeting the “no detectable emissions” requirement.
- ❑ §60.5413a: Existing control devices and the piping to them are not likely to have the necessary ports installed to enable performance testing as specified in §60.5413a and would have to be taken offline in order to retrofit them if retrofit is even possible.
- ❑ §60.5415 & §60.5417: Existing control devices are unlikely to have all of the monitoring instruments and capabilities required for continuous compliance demonstration as required in §60.5415a and these would have to be retrofitted to the control device. Again, retrofit may not be possible which would leave an operator with no avenue to comply without installing a new control device which EPA already found to be not reasonable from a control cost standpoint. Additionally, the data monitoring, logging and averaging required under §60.5417a would require either installation of an entirely new monitoring system or tying the monitoring devices into an existing automation system programmable logic controller (PLC) which may not have the number of input ports necessary nor have the memory and computing power necessary. Due to the typical lack of electrical power, the installation of a monitoring system would also require installation of a solar power system with the necessary power to operate the system and the necessary battery back-up to assure adequate data recovery.

The proposed rule unnecessarily and inappropriately requires existing control devices and closed vent systems to comply with the full suite of requirements identical to those specified for control devices and systems on centrifugal compressor affected facilities degassing tank vents if a new, modified, or reconstructed pneumatic pump affected source is routed to the control device. EPA failed to recognize that the majority of the existing control devices and closed vent systems installed on sites where pneumatic pumps are likely to be used will not already be subject to Subpart OOOO requirements let alone those for centrifugal compressor affected facilities. Since centrifugal compressors are rarely used in the production segment and new, modified, or reconstructed centrifugal compressors in the gathering & collection, processing, and

transportation & storage segments are almost certainly dry seal equipped, the probability is near zero that an existing control device on well sites or remote facilities would already be subject to the centrifugal compressor affected source requirements for closed vent systems and control devices. Most already installed or newly installed control devices/systems and closed vent systems will predate the requirements of Subpart OOOO or be installed pursuant to State regulations or enforceable permit conditions that limit emissions below the thresholds for applicability of Subpart OOOO. Even where an existing control device and closed vent system has applicable requirements under Subpart OOOO, these are almost certainly those requirements for control devices and closed vent systems installed on storage tank affected sources rather than centrifugal compressor affected sources and thus would have new requirements under the proposed rule. This could subject an individual control device and closed vent system to a dual set of requirements if the proposed rule is finalized as proposed. Note that this discussion focuses on enclosed combustion control devices as sites with VRU's are likely to have electricity and hence no pneumatic pump affected sources.

Requiring control devices and covered vent systems, where a pneumatic pump affected source is routed to them, to comply with the performance testing, continuous monitoring, and associated requirements of the proposed rule is not necessary. The exhaust from a pneumatic pump affected source is the same natural gas used for the pilot flame in a combustion control device and as fuel for a boiler or heater. It is not difficult to combust and should not require the same rigor of demonstration for more difficult to combust compounds. In general, the low molecular weight straight chain aliphatic hydrocarbons that characterize the natural gas industry, including associated gas, are easy to combust.

To address the issues regarding retroactive application of the requirements in §60.5410a, §60.5411a, §60.5412a, §60.5413a, §60.5415a, §60.5416a, and §60.5417a to existing control devices and closed vent systems not already subject to the requirements proposed, API recommends EPA take one of the following approaches.

Maintain the current definition of pneumatic pump affected source and require that the existing control device and closed vent system comply with whatever existing requirements for testing, monitoring, and reporting exist for the particular site/control device and closed vent system.

-or-

Redefine the pneumatic pump affected source as only those new, modified, or reconstructed natural gas powered pneumatic pumps installed at a site with an existing control device that is already subject to the requirements contained in §60.5410a, §60.5411a, §60.5412a, §60.5413a, §60.5415a, §60.5416a, and §60.5417a proposed in the rule.

To assure the integrity of the newly installed piping routing a new, modified, or reconstructed pneumatic pump affected source to an existing closed vent system or directly to the control device EPA could require an annual leak inspection with an Optical Gas Imaging camera for the newly installed piping to an existing control device or closed vent system.

Response: The EPA has changed the final rule to remove compliance requirements (e.g., performance testing and continuous monitoring) for existing control devices used to control pneumatic pump emissions. However, the closed vent system requirements under §60.5411a, and §60.5416a are still applicable. The closed vent system is assumed to be either new or retrofitted for the pneumatic pump emissions, and this cost is included in the cost of control calculations and supporting statement cost for ongoing compliance. The EPA does not intend to impose any compliance requirements on an existing control device or process such that any additional cost would be incurred beyond connection using the closed vent system.

Commenter Name: Matthew Hite

Commenter Affiliation: Gas Processors Association (GPA)

Document Control Number: EPA-HQ-OAR-2010-0505-6881

Comment Excerpt Number: 29

Comment: EPA Must Remove the CPMS Requirements for Control Devices that Were Not Required to Have Them Under the Original Rule

In the proposed rule, EPA would require all pneumatic pump control devices to “install and operate the continuous parameter monitoring systems” required by 40 C.F.R. § 60.5417a(a)-(g). 40 C.F.R. § 60.5410a(b)(5). GPA urges EPA to eliminate this requirement for existing Subpart OOOO control devices. Those devices should already be subject to continuous demonstration requirements under Subpart OOOO and additional requirements should not be required. Continuous parameter monitoring was not required in the original rule for storage tank sources and is not appropriate for pneumatic pumps which are generally much smaller sources of emissions. These are the most common types of sources requiring control and most likely to also be co-located at sites with pneumatic pumps. The rule does not take into account the additional expense that will be required to meet the measurement requirements and therefore should not be required under the rule. Because the monitoring requirements imposed by Subpart OOOO have been approved by EPA as sufficient to ensure compliance, there is no need to add new burdens to those control devices.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 37.

Commenter Name: Matthew Hite

Commenter Affiliation: Gas Processors Association (GPA)

Document Control Number: EPA-HQ-OAR-2010-0505-6881

Comment Excerpt Number: 34

Comment: EPA Must Extend the Initial Compliance Deadline After a Control Device is Installed or a Pneumatic Pump is Added

In the proposed rule, EPA requires that new or modified pneumatic pump sites that currently lack an emission control device will become an affected facility if a control device is later installed. GPA does not dispute EPA's position. However, GPA is concerned that EPA does not give such sources sufficient time to come into compliance. As proposed, a source must come into compliance within 30 days after a control device is installed. Proposed 40 C.F.R. § 60.5393a(b)(2)(ii). GPA urges EPA to extend this compliance deadline until 30 days after startup of the control device. This approach will give facilities more flexibility to properly startup and commission the new control device. Subpart OOOOa pneumatic pump requirements are triggered. This will ensure that the control device can be properly tested after installation without concern over triggering non-compliance for pneumatic pump controls.

In addition, EPA must provide additional time to connect a newly installed pneumatic pump to a control device. The timeframe to identify a need for a pneumatic pump, purchase, install, and begin operating the pump can occur in a matter of days since pumps are purchased ready to operate. For example, a site may identify a need to install methanol injection pumps due to impending cold weather and install the pumps in a matter of days. These pumps and accompanying storage totes are portable and quickly put into service. However, analyzing an existing control device for capability to accept additional flows, designing the connections, and purchasing and constructing the connection piping is much more involved and has significantly more safety concerns that must be mitigated. This process could easily take several months. Therefore, GPA urges EPA to allow 180 days after the installation of a pneumatic pump to connect to an existing NSPS OOOO or OOOOa control device.

Response: For reasons related to certifying technical infeasibility and assessing safety issues of routing the pneumatic pump to an existing control device on site, we believe the proposed 30-day initial compliance period may be insufficient to make an assessment of the technical feasibility and issue the required certification. Therefore, we have amended the final rule to specify that the initial compliance period now begins 180 days after the date of publication of the final rule in the Federal Register. See Section VI.D.8 of the preamble to the final rule for more detail regarding this issue.

We also agree that, with regard to the subsequent installation of a control device, 30 days after startup of the control device is a more appropriate compliance date and have revised the final rule accordingly. See section VIII.E.1 of the preamble to the final rule for more detail regarding this issue.

With respect to an extended compliance period for new, modified, or reconstructed pumps, the rule requires compliance upon startup. This is consistent with all NSPS requirements and we believe that consideration of the revisions to the final rule not including limited-use pumps and piston pumps in the definition of pneumatic pump affected facilities, we have largely addressed the commenter's concern. We believe that for diaphragm pumps, an initial evaluation of the control device or process and construction of the connections can be completed prior to startup of the new pump.

Commenter Name: Howard J Feldman

Commenter Affiliation: American Petroleum Institute

Document Control Number: EPA-HQ-OAR-2010-0505-6884

Comment Excerpt Number: 85

Comment: Non-Affected Facilities (E.G. Pumps Not Requiring Controls Under The NSPS) Should Not Have Obligations Under The Rule.

Under §60.5360a(h)(2), EPA has defined that the OOOOa affected source for pneumatic pumps “for locations other than natural gas processing plants” is a “a single natural gas-driven chemical/methanol pump or natural gas-driven diaphragm pump for which a control device is located on site.” However, under §60.5410a(e)(3) and §60.5420a(b)(8)(i), EPA is proposing that you must submit a certification if the pneumatic pump is not controlled by 95% because a control devices is not available at the site.

A pump at a site without a control device is not an affected source and should not have requirements under OOOOa. EPA should remove the requirements requiring certification for pumps located at sites without control devices.

API recommends that §60.5410a(e)(3) and §60.5420a(b)(8)(i) should be removed from the proposed rule.

Response: We have revised the definition of the affected facility for pneumatic pumps such that all new, modified, or reconstructed diaphragm pumps at well sites and natural gas processing plants are affected facilities. This removes any ambiguity with respect to final rule reporting and recordkeeping requirements. The final rule requires the owner/operator of all new, modified, or reconstructed pneumatic pump affected facilities to report after installation, modification, or reconstruction as either controlled or not-controlled in an initial annual report. If the status of the pump's control changes, the owner/operator must report that change in the next annual report, indicating the current control status.

Commenter Name: Matthew Hite

Commenter Affiliation: Gas Processors Association (GPA)

Document Control Number: EPA-HQ-OAR-2010-0505-6881

Comment Excerpt Number: 33

Comment: EPA Must Clarify the Requirements for Initial Compliance

For pneumatic pumps that lack an available control device, EPA requires that the source include a certification in its initial annual report. However, the proposed regulations do not clearly specify which types of control devices must be available at the site to trigger regulation. Specifically, 40 C.F.R. § 60.5410a(e)(3) states:

(e) To achieve initial compliance with emission standards for your pneumatic pump affected facility you must comply with the requirements specified in paragraphs (e)(1) through (6) of this section, as applicable.

(1) You own or operate a pneumatic pump affected facility located at a natural gas processing plant and your pneumatic pump is driven by a gas other than natural gas and therefore emits zero natural gas.

(2) You own or operate a pneumatic pump affected facility located other than at a natural gas processing plant and your pneumatic pump is controlled by at least 95 percent.

(3) You own or operate a pneumatic pump affected facility located other than at a natural gas processing plant and your pneumatic pump is not controlled by at least 95 percent because a control device is not available at the site, you must submit the certification in 40 C.F.R. § 60.5420a(b)(8)(i).

Likewise, the certification requirements in 40 C.F.R. § 60.5420a(b)(8)(i) state:

(b)(8) For each pneumatic pump affected facility, the information specified in paragraphs (b)(8)(i) through (v) of this section. (i) In the initial annual report, a certification that there is no control device on site, if applicable.

It appears that EPA's intent was that the annual certification provision would apply to sources where pneumatic pumps are located at a site that lacks a control device capable of meeting the 95% control requirement in 60.5410a(e)(3). However, the 95% control requirement does not appear in 40 C.F.R. § 60.5420a(b)(8)(i), which creates uncertainty as to when a certification is required. To resolve this uncertainty, GPA urges EPA to revise 40 C.F.R. § 60.5420a(b)(8)(i) should be revised to read:

(i) In the initial annual report, a certification that there is no control device that meets the requirement of 60.5410a(e)(2) on site, if applicable.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 85.

Commenter Name: Douglas Jordan, Director Corporate Environmental Programs, V+ Resource Development

Commenter Affiliation: Southwestern Energy (SWN)

Document Control Number: EPA-HQ-OAR-2010-0505-6922

Comment Excerpt Number: 20

Comment: The rule also requires that pneumatic pump affected facilities at well sites or compressor stations without controls submit an annual certification indicating that there are no controls at the site the pneumatic pump affected facilities are located at. This imposes a

significant administrative burden on well site and compressor station operators with no environmental benefit.

Recommendations:

SWN recommends that the provision to submit a certification under 60.5393a (b)(2)(i) be removed from the rule. This provision provides no environmental benefit (in terms of reducing emissions) and is merely an administrative burden.

Response: See responses to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 85, and DCN EPA-HQ-OAR-2010-0505-6474, Excerpt 21.

Commenter Name: Laredo Petroleum

Commenter Affiliation: Laredo Petroleum

Document Control Number: EPA-HQ-OAR-2010-0505-6474

Comment Excerpt Number: 21

Comment: The proposed required reporting and recordkeeping for pneumatic pumps and controllers, referenced on page 56615, column 1, under section VII J. Recordkeeping and Reporting, will require the addition of thousands of annual reports at locations that may do nothing more than install a pneumatic chemical pump at a location that does not have a control device. These facilities should be exempt from annual reporting.

Response: We assess recordkeeping and reporting for the sources covered by the NSPS under the supporting statement analysis. We anticipate that a single regulated entity will be able to submit one annual report with all affected facilities for that regulated entity. Therefore, we disagree that the requirement to report compliance status on an initial annual report for pneumatic pump facilities will be overly burdensome.

Commenter Name: Howard J Feldman

Commenter Affiliation: American Petroleum Institute

Document Control Number: EPA-HQ-OAR-2010-0505-6884

Comment Excerpt Number: 86

Comment: Remove The Tagging Requirement.

It is unclear what EPA's intent is for requiring tagging of affected natural gas driven pneumatic pumps under §60.5393a(a)(2), §60.5393a(b)(3) and §60.5410a(e)(4). The applicability is clear that if the pump is new, modified, or reconstructed after September 18, 2015, not at a natural gas processing plant, and with a control device on site. The tagging appears to add little value.

Furthermore, it is confusing that tagging be required for pneumatic pumps that are not affected facilities because a control device is not on-site (as required by §60.5410a(e)(4)).

API requests that EPA remove the following paragraphs related to tagging:

~~§60.5393a(a)(2): Each pneumatic pump affected facility at a natural gas processing plant must be tagged with the month and year of installation, reconstruction or modification, and identification information that allows traceability to the records for that pneumatic pump as required in § 60.5420a(c)(16)(i).~~

~~§60.5393a(b)(3) Each pneumatic pump affected facility at a location other than a natural gas processing plant must be tagged with the month and year of installation, reconstruction or modification, and identification information that allows traceability to the records for that pump as required in § 60.5420a(c)(16)(i).~~

~~§60.5410a(e)(4) You must tag each new pneumatic pump affected facility according to the requirements of § 60.5393a(a)(2) or (b)(3).~~

Alternatively: API requests that EPA at least limit tagging such that it is only required for pumps with a control device on site for which control has been determined to be technically infeasible.

Response: See section VIII.E.4 of the preamble to the final rule for more detail regarding this issue.

Commenter Name: Kathleen M. Sgamma, Vice President, Government and Public Affairs

Commenter Affiliation: Western Energy Alliance

Document Control Number: EPA-HQ-OAR-2010-0505-6930

Comment Excerpt Number: 46

Comment: *Operators should not be required to individually tag “affected facilities.”*

For affected pneumatic controllers only—or, continuous high-bleed devices, as discussed above—operators should only be required to maintain a list of make, model, and serial number, rather than individual tags. A list of make, model, and serial number will achieve the same results desired by EPA, without presenting the unnecessary operational hurdles associated with individual tagging and recordkeeping. For example, tags can be damaged by weather and are unnecessarily difficult to maintain. Moreover, OOOOa appears to require operators to tag both facilities that constitute “affected facilities,” and those that do not; which is unnecessary, confusing, and likely illegal. The proposal effectively requires tagging for components that fall under NSPS OOOO and for components that do not, which essentially requires operators to prove the negative. By tagging devices to prove they do not fall under the rule, EPA is imposing the same recordkeeping requirements on these devices even though they have been deemed to have low enough emissions to not be a cost-effective target for reductions. We believe such

requirement exceeds EPA's legal authority and ignores the requirement to only promulgate rules which are determined to be cost-effective.

Response: See section VIII.E.4 of the preamble to the final rule for more detail regarding this issue.

Commenter Name: Cory Pomeroy, General Counsel
Commenter Affiliation: Texas Oil & Gas Association
Document Control Number: EPA-HQ-OAR-2010-0505-7058
Comment Excerpt Number: 78

Comment: EPA proposes that each pneumatic pump affected facility at a location other than a natural gas processing plant must be tagged with the month and year of installation, reconstruction or modification, and identification information that allows traceability to the records for that pump as required in proposed Section 60.5420a(c)(16)(i). In proposed Section 60.5365a(d)(1), pneumatic pumps operating at 6 scfh or less are not considered affected facilities. Applying this reasoning, uncontrolled pumps that do not exceed the 6 scfh threshold set forth in proposed Section 60.5365a(d)(1) should not be affected facilities and should not be subject to these tracking requirements.

Response: See section VIII.E.4 of the preamble to the final rule for more detail regarding this issue.

Commenter Name: Will Whisenant, Safety and Security Operations Coordinator
Commenter Affiliation: Virginia Oil and Gas Association (VOGA)
Document Control Number: EPA-HQ-OAR-2010-0505-7047
Comment Excerpt Number: 3

Comment: The section regarding Pneumatic Controllers and pumps should have a focus on high bleed devices and relaxed testing, recordkeeping, and reporting requirements for operators that have switched to low-bleed or air-controlled devices.

Response: We have revised the affected facility definition to not include pneumatic piston pumps and limited-use pneumatic pumps which we believe addresses the issue raised by the commenter. See sections VI.D.1 and VI.D.7 of the preamble to the final rule for further discussion of these issues.

Commenter Name: Matthew Hite
Commenter Affiliation: Gas Processors Association (GPA)

Document Control Number: EPA-HQ-OAR-2010-0505-6881

Comment Excerpt Number: 31

Comment: EPA Must Provide an Exclusion for Like-Kind Replacements GPA also requests that EPA specifically exclude like-kind replacements of pneumatic pumps from regulation under Subpart OOOOa. From time to time, existing pneumatic pumps at a compressor station must be replaced due to age, wear, or a number of other reasons. In such situations, a new pump is simply exchanged for the existing compressor with no associated change in operations or throughput at the facility. As GPA explained in Section III.A., because like-kind replacements of equipment merely substitute for existing equipment, they do not increase a facility rate of emissions. Thus, GPA urges EPA to clarify that “like-kind” replacements do not constitute a “new pump” for purposes of triggering regulation under Subpart OOOOa.

Response: Clean Air Act section 111(b) applies to new, modified, and reconstructed sources regardless of whether a previously existing pneumatic pump is being replaced. Here, the affected facility is the pneumatic pump that is being replaced. Therefore, when an owner/operator must replace an existing pneumatic pump with a new pneumatic pump, the final rule requirements equally apply to that like-kind replacement pump.

Commenter Name: Howard J Feldman

Commenter Affiliation: American Petroleum Institute

Document Control Number: EPA-HQ-OAR-2010-0505-6884

Comment Excerpt Number: 79

Comment: The Rule Text Should Exempt Portable Pneumatic Pumps.

There are many scenarios where portable pneumatic pumps are used by industry for infrequent and temporary operations, such as pumping out a tank or a sump. Since these pumps will, by their very nature, result in very low emissions, portable pumps should be exempt from the rule. Such as exemption would be analogous to that provided to portable or transportable (has wheels, skids, carrying handles, dolly, trailer or platform) engines relative to the NSPS RICE rules.

API recommends that EPA update the definition of pneumatic pump under the rule to exclude temporary and portable pumps.

EPA should amend the definition under §60.5430a to address these temporary and portable sources, i.e. “A temporary or portable pump is considered a stationary source under this rule if the stays in one location for more than 12 months (or full annual operating period of a seasonal source).” (See revised definition under 24.4.3.)

Response: We have revised the affected facility definition to not include limited-use pneumatic pumps at well sites that are used less than 90 days per calendar year. We believe that this change addresses the commenter’s concern regarding temporary or portable pumps. See section VIII.E.3 of the preamble to the final rule for more detail regarding this issue.

Commenter Name: J. Roger Kelley, Director, Regulatory Affairs
Commenter Affiliation: Continental Resources, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6963
Comment Excerpt Number: 7

Comment: Second, OOOOa's attempt to regulate the volume of VOC/methane emissions from pneumatic pumps at wellheads is absurd given industry's widespread shift to solar electric pneumatic pumps and the low multiple of the volume of liquid pumped by these units. For purposes of discussion, let's exaggerate and assume the typical volume of liquid being pumped by these units is 100 standard cubic feet/day. 100 standard cubic feet/day would theoretically result in VOC/methane emissions of approximately 10 lbs/day. To control this negligible volume of VOC/methane emissions, an operator would be required to install a compressor to process the emissions back to the storage vessels or directly to an existing control device.

Response: The EPA disagrees with the commenter that control of pump emissions at wellheads is not warranted. We have determined that control of pneumatic pump emissions is cost effective based on an average of emissions for diaphragm pumps and that there are still many gas-driven pumps in use in the production segment. In addition, the final rule provides a technical infeasibility exemption to address the issue raised by the commenter with regard to low pressure that would require installation of additional compression to route the emissions.

Commenter Name: Emily E. Krafjack
Commenter Affiliation: Connection for Oil, Gas and Environment in the Northern Tier, Inc., (C.O.G.E.N.T.)
Document Control Number: EPA-HQ-OAR-2010-0505-6787
Comment Excerpt Number: 29

Comment: We have concerns about malodors relating to the use of glycol in the dehydration process. People have commented on noticing a certain pungent odor when near the environs of compressor stations and well sites. Malodors beyond the fence-line are not in compliance with Pennsylvania's regulations. However, the fleeting nature of the malodors or with them occurring off-hours people have a tendency not to phone the DEP and report them. That doesn't make them any less real. We recommend that the EPA provide guidelines, fact sheets to explain to the public when a malodor necessitates reporting and are malodors such as those consistent with glycol dehydration a public health risk.

Response: Commenter expresses concern regarding odors associated with hydrocarbon emissions such as those addressed by this rule for oil and natural gas facilities. This final rule does not establish standards with regard to odors associated with affected facilities and therefore this comment is outside the scope of this rule.

Commenter Name: Kelly Guertin, Senior Environmental Engineer, Environmental Management and Resources

Commenter Affiliation: DTE Energy (DTE Gas Company)

Document Control Number: EPA-HQ-OAR-2010-0505-7052

Comment Excerpt Number: 16

Comment: DTE Energy agrees with AGA's and INGAA request that EPA clarify the scope of the regulations, including EPA's intention to only regulate compressor stations associated with underground storage and compressors and pneumatic devices located at compressor stations.

Response: The EPA disagrees with the commenter that the intention of the rule is to only regulate equipment at compressor stations. The final rule applies to all compressors and pneumatic controllers located in any segment of the oil and natural gas industry. We have removed natural gas-driven pumps at gathering and boosting stations and in the transmission and storage segments from the requirements of the final rule. See section VI.D.2 of the preamble to the final rule for a discussion on this issue.